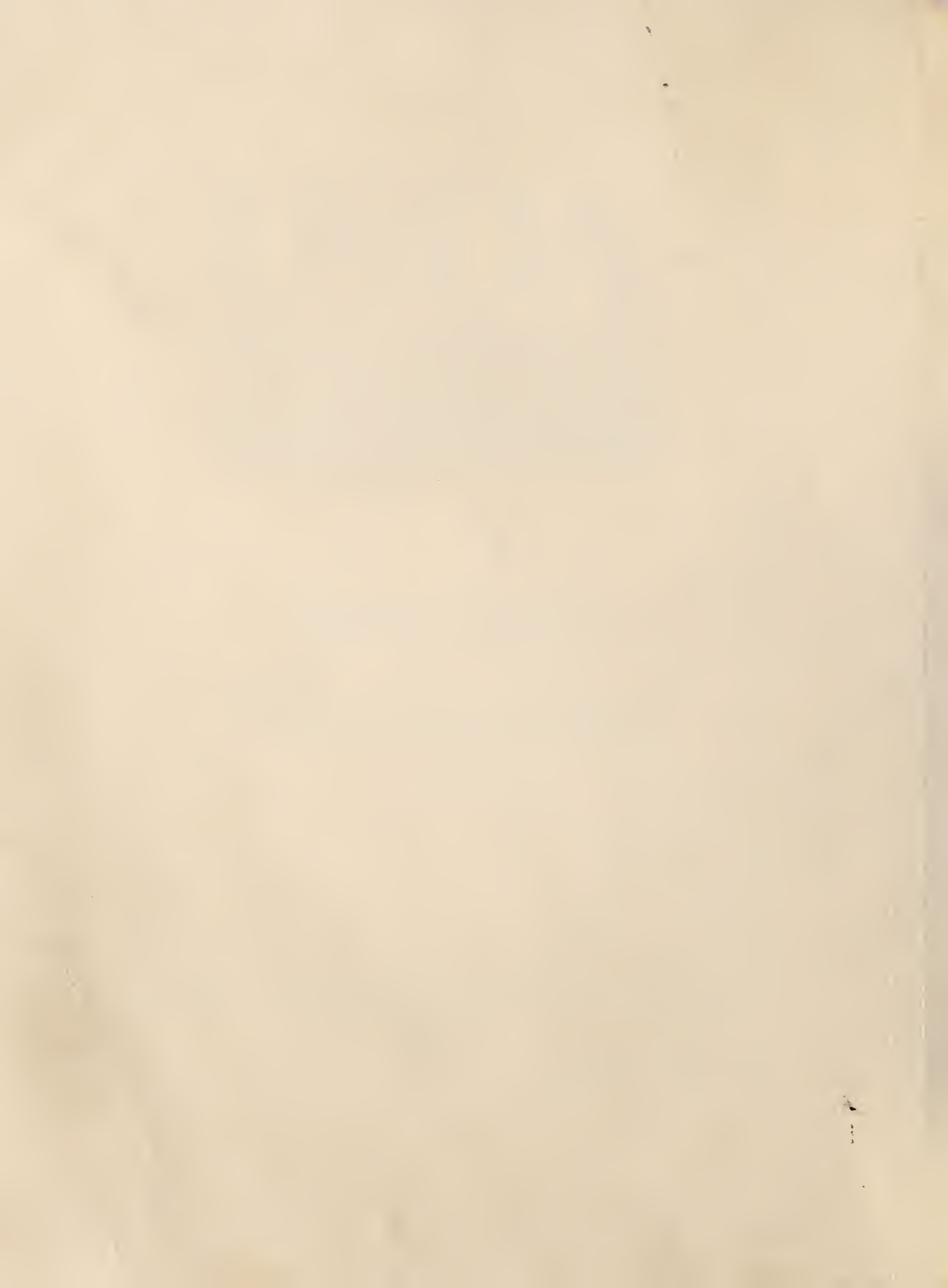


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August 1984

Vegetable

Outlook and Situation Report

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Summer fresh vegetable harvest
acreage up 1 percent, page 3



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Summary

The Consumer Price Index (CPI) for fresh vegetables (excluding potatoes) declined throughout the second quarter of 1984, averaging 327 (1967=100). This is 3.5 percent above a year earlier, but 14 percent below first-quarter prices. The drop reflects increased supplies of all major fresh items. Following a reduced potato harvest in the fall of 1983, potato prices climbed each month during the first half of 1984.

For summer-quarter 1984, prospective harvested acreage is 1 percent greater than a year earlier for the seven major fresh vegetables: broccoli, carrots, cauliflower, celery, sweet corn, lettuce, and tomatoes. Honeydew melon and onion acreages are also expected to increase 7 and 3 percent, respectively.

January-June 1984 production of the seven major fresh vegetables and honeydews and onions is estimated at 77.7 million cwt, 3.3 million cwt above last year. The 4-percent increase comprises increases of 1 percent in acreage and 2 percent in yields.

Acreage planted for processing snap beans, sweet corn, green peas, and tomatoes is estimated at 1.3 million acres, up 7 percent from 1983. The index of wholesale prices for canned items rose 1 percent from May to June but leveled in July. This marks a reduction in seasonal ending stocks and the prospect for a larger pack in 1984 compared with 1983. Frozen vegetable wholesale prices in June rose 0.7 percent over May, and further moderation is expected because of a 10-percent increase in acreage planted to snap beans, sweet corn, and green peas.

Production of processing green peas in 1984 is estimated at 486,000 tons, 17 percent more than last year. A 6-percent increase in green pea yields comes from yield increases in all major States except New York, where per-acre yields fell to 1.25 tons, down from 1.50 tons in 1983.

For commercial vegetables, the grower price index leveled in June after falling 10 percent from 136 in April to 122 (1977=100) in May. Preliminary estimates indicate continued stability for the remaining summer months. For fresh vegetables, the index dropped 14 percent to 117 in May and leveled in June, as summer harvest areas spread to northern States. Second-quarter 1984 grower prices were higher than a year earlier for fresh carrots and onions, but lower for celery, lettuce, and tomatoes.

Harvested acreage for the 1984 potato crop is forecast at 1.3 million acres, 5 percent more than in 1983. Acreage for the fall crop is placed at 1.09 million acres. Because of the generally good crop, 1984 production is expected to be greater than last year for all seasonal groups. Grower prices for the second half of 1984 are expected to be 12 to 15 percent below 1983.

Sweetpotato production could average between 12.3 and 13 million cwt. Grower prices, which were exceptionally good through the first 6 months of 1984, will weaken as the larger harvest is marketed.

Dry bean acreage is up 24 percent over 1983. Through June, growers received \$21.18 a cwt for dry beans, 60 percent more than last year. Dry pea and lentil acreage declined again this year. Tight stocks bolstered prices despite sluggish export activity.

Acknowledgement

Jules V. Powell, who worked in the USDA for 36 years analyzing the supply, demand, and price of vegetable, fruit, and horticultural specialty crops, retired on May 31, 1984. Jules was leader of the Supply, Demand, and Price Analysis section in the Fruits, Vegetables, and Sweeteners Branch of the Economic Research Service for the past 4 years. In addition to his vast knowledge and sound judgement on economic matters relating to the fruit and vegetable industries, Jules wrote clearly and concisely about a wide range of complex issues. He is sorely missed by his many colleagues, both within USDA and the fruit and vegetable industries. We all wish Jules a long and fulfilling retirement.

IN THIS ISSUE

This issue examines the season-long impacts of the December 1983 freeze in Florida and Texas on available supplies of six winter and spring vegetables: green beans, cucumbers, eggplant, peppers, squash, tomatoes, and cherry tomatoes. Judicial and legislative events that affect the vegetable industry and several recent studies of vegetable statistics are highlighted.

The situation and outlook in the vegetable industry are analyzed with special emphasis on spring and summer supplies and prices. Potatoes, sweetpotatoes, and dry edible beans are treated as separate subjects with a focus on fall harvest acreage.

The per capita consumption of major vegetable items is reported for 1983. To augment the annual reporting of per capita consumption, this report contains a special article that examines relationships between the demand for vegetables and socioeconomic factors such as income, region of residence, race, household age composition, and season.

SITUATION UPDATE

In the May 1984 report, total shipments of six winter and spring vegetables were projected at 4 to 10 percent more than for the 1982/83 season. The current estimate, using Agricultural Marketing Service shipment totals from October 16, 1983, through June 30, 1984, is for a 4-percent rise in total shipments, composed of a 4-percent increase in green beans, cucumber, squash, and tomatoes, and a 7-percent drop in eggplant and bell peppers. About 90 percent of these winter vegetables are supplied from Florida and Mexico.

The share Florida shipped of all six items dropped to 50 percent, down 1 point from the 1982/83 season. Mexico's share rose from 39 percent in 1982/83 to 42 percent in 1983/84. Changes in the totals for all six items are influenced by tomatoes, including cherry tomatoes, which

make up about 55 percent of the total weight of all six commodities.

Prior to the late-December 1983 cold snap in Florida and Texas, fresh tomato shipments were 12 percent greater than for the comparable period in 1982. Mexico's share of the total was 13 percent and Florida's share was 70 percent, 3 points greater than in the fall of 1982. From the freeze until mid-March, Florida's share dropped to average 34 percent, while Mexico's rose to average 65 percent.

Florida growers shipped 10 percent more tomatoes this spring than last, but Mexican producers shipped 27 percent less. Meanwhile, grower prices for fresh tomatoes dropped from \$40 per cwt in the first quarter of 1984 to \$27 in the second quarter. Representative wholesale prices in New York fell from \$30 for 25 pounds of mature green, 5X6's to less than \$15 from late March to early June.

Damage from the December freeze did not seriously alter Florida's overall position in the U.S. market vis-a-vis Mexico's. From October 1983 to June 1984, Mexico's share of total fresh tomato and cherry tomato shipments increased 3 points to 40 percent, while Florida's share dropped only 1 point to 55 percent. The two countries traded positions in the eggplant market as Mexico's share increased from 44 to 53 percent and Florida's share dropped from 51 to 45 percent. In the bell pepper market, Florida's share dropped 4 points to 51 percent. Florida's share of the remaining three commodity markets was relatively unchanged: green beans (78 percent), cucumber (36 percent), and squash (41 percent).

The last time Mexico's competitive position sustained similar strength for more than 1 year was in the mid-1970's, when, as noted in the May issue, several Florida vegetable grower organizations petitioned for an investigation into Mexican export patterns. That effort showed that Mexican growers had not "dumped" certain winter vegetables onto U.S. markets. Currently, Florida growers are interested in expanding exports to Mexico and have called for a reduction in Mexican trade barriers.

Supreme Court's Decision on Marketing Orders

On June 4, 1984, the Supreme Court reversed a December 1980 Court of Appeals ruling that recognized consumer interests in milk market order procedures. The Supreme Court found no provisions in the Agricultural Marketing Agreement Act of 1937 entitling consumers to seek judicial review of USDA's procedures in administering the orders.

The precedent in this case¹ involving dairy market orders is favorable for continuation of vegetable and fruit marketing orders. The Court expressed concern that "consumer suits would undermine the congressional preference for administrative remedies and provide a mechanism for disrupting administration of the congressional scheme."

Commenting on the congressional intent behind market orders, Justice O'Connor wrote, "the Act contemplates a cooperative venture among the Secretary, handlers, and producers the principal purposes of which are to raise the price of agricultural products and to establish an orderly system for marketing them." The 13 Federal vegetable marketing orders cover certain producers and handlers of potatoes, onions, tomatoes, celery, lettuce, and melons. All 13 orders include authority for grade and size regulations. The Florida celery order provides for producer allotments. And the onion, celery, and lettuce marketing orders include authority for certain market flow provisions, such as shipping holidays.

Immigration Reform

The House of Representatives sent to conference committee their version of an immigration reform bill. A Senate and House compromise will probably contain at least three important provisions: (1) employer penalties for hiring undocumented workers, (2) a revised temporary worker program, and (3) amnesty for illegal immigrants proving residence since a yet unspecified date.

A recent Economic Research Service analysis, *Immigration Reform and Agricultural Labor* by Dr. Robert Coltrane, discusses the importance of immigration reform attempts for vegetable producers. Vegetable and melon producers alone paid 9.6 percent of the total bill for hired or contracted agricultural labor reported in the 1978 Census of Agriculture. Together with fruit, tree nut, and specialty items, horticultural production comes from about 6.4 percent of all U.S. farms, and requires 35.1 percent of the total expenses for hired or contracted agricultural labor. The three top ranking States for agricultural labor expenses in 1978 were California, Florida, and Texas.

Dried Goods

A preliminary report of the 1982 Census of Manufacturers details industry statistics for firms producing dehydrated fruits, vegetables, and soups (Standard Industrial Code [SIC] 2034). In 1982, 118 companies constituting 148 establishments, employed 13,000 people, and shipped \$1.7 billion in products. In 1977, there were 143 com-

panies, 184 establishments, 14,400 employees, and \$100 million in shipments. The top ranked States in employment were California, Idaho, Illinois, New Jersey, and Washington. The quantity and value of fresh vegetables processed into dehydrated products in 1982, by firms in SIC 2034, totaled 2.06 million tons worth \$228.9 million, compared with 2.86 million tons worth \$145.8 million in 1977.

Farm Production Expenditures 0.2 Percent Higher in 1983

A preliminary summary of farm cost data by USDA's Crop Reporting Board, found that 1983 farm production expenses totaled \$131.2 billion, 0.2 percent above 1982. The total increase is attributed to hefty increases in feed and motor vehicle costs, which combine to make up 23.2 percent of all costs. The average cost of labor and agricultural chemicals, one-fifth of the total, dropped 2 to 3 percent in 1983. Fuel and energy costs, 7.3 percent of total expenditures, dropped 1.5 percent.

In the Pacific region (California, Oregon, Washington), 86 percent of total farm expenditures in 1983 came from large operations (sales of \$100,000 or more), whereas smaller operations accounted for 14 percent. In the Lake States (Michigan, Minnesota, Wisconsin), large operations accounted for 61 percent of the region's total expenditures, and in the Southeast region (Alabama, Florida, Georgia, South Carolina), they accounted for 76 percent.

Cash Receipts

The Economic Research Service estimated cash receipts on all crop farms in 1983 at \$69.5 billion, of which \$8.2 billion was received from vegetable operations. The 1984 estimates, accounting for greater production and moderate inflation, place total farm cash receipts at \$70-74 billion. Cash receipts of vegetable growers are expected to increase 10 percent over 1983, to \$9 billion.

FRESH VEGETABLES

First-Half 1984 Review

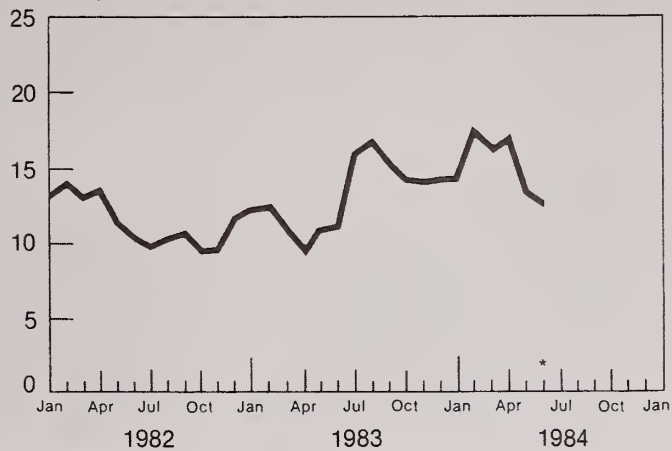
Retail prices for fresh vegetables reached a 10-year high in February, when tight supplies in Florida and Texas pushed the Consumer Price Index (CPI) (excluding potatoes) to 392 (1967=100). The March mark of 390 was sufficient to carry the quarterly average to 384, up 32 percent from first-quarter 1983. The previous high was 362, set in February 1982, after a late December freeze reduced Florida vegetable production. Retail prices began their seasonal decline during second-quarter 1984, and fell more sharply than they did in second-quarter 1982. The second-quarter 1984 average CPI (excluding potatoes) fell to 311, down 19 percent from 384 in the first quarter.

Potato prices in the fresh vegetable CPI have buoyed the aggregate index because of a reduced fall 1983 potato crop. January-June retail potato prices averaged \$.24 a pound, the highest average since the \$.027 during the first half of 1981. Other retail prices that have served to buoy the aggregate average are carrots, onions, celery, and mushrooms.

¹Case No. 83-458, John R. Block, Secretary of Agriculture, et. al., *Petitioners vs. Community Nutrition Institute et. al.*

Carrots: F.O.B. Shipping Point Price

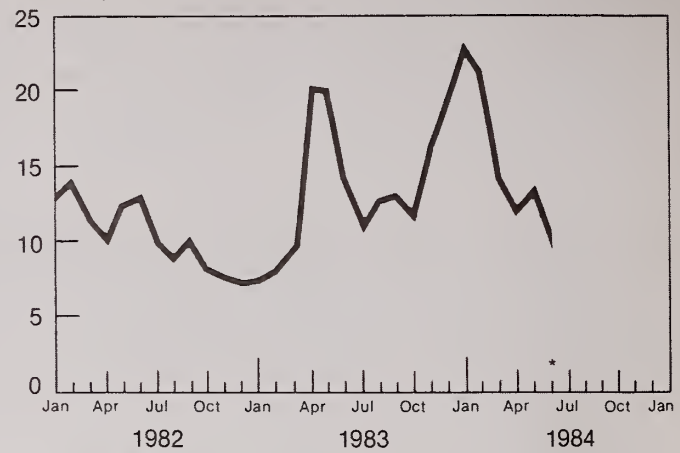
Dollars per cwt.



*15th of June

Celery: F.O.B. Shipping Point Prices

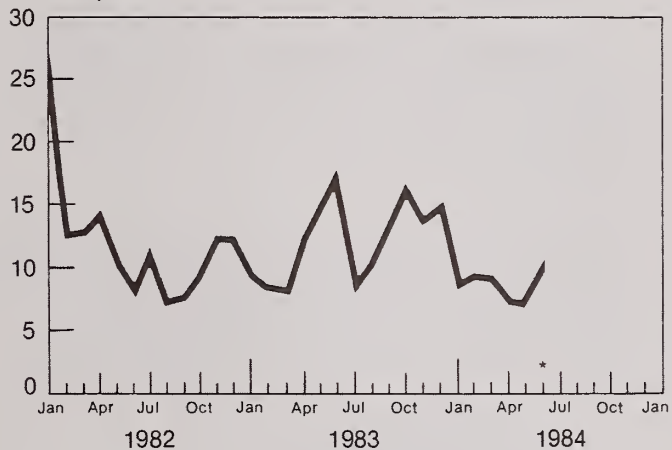
Dollars per cwt.



*15th of June

Lettuce: F.O.B. Shipping Point Prices

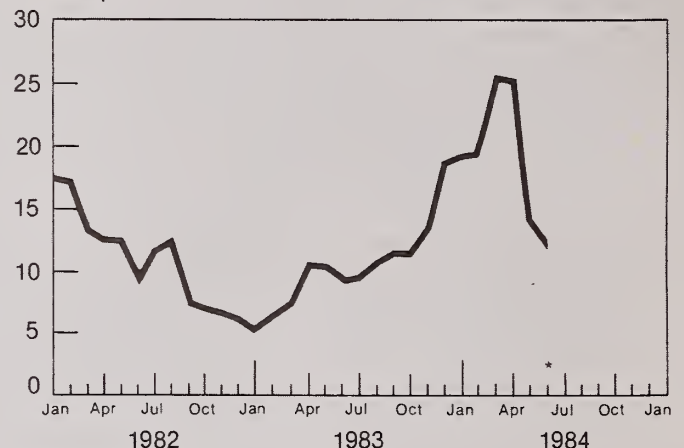
Dollars per cwt.



*15th of June

Onions: F.O.B. Shipping Point Prices

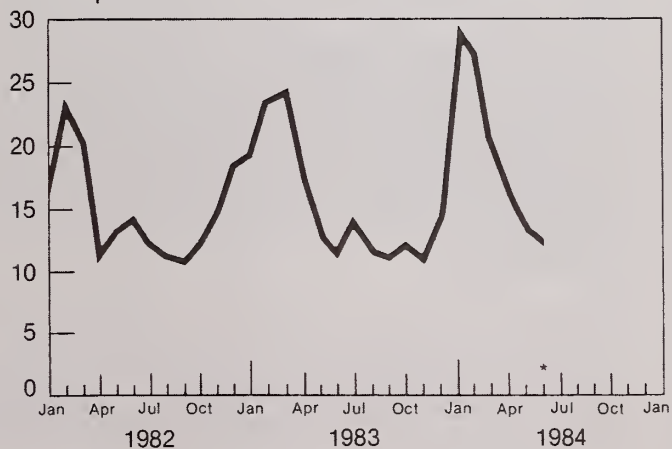
Dollars per cwt.



*15th of June

Sweet Corn: F.O.B. Shipping Point Prices

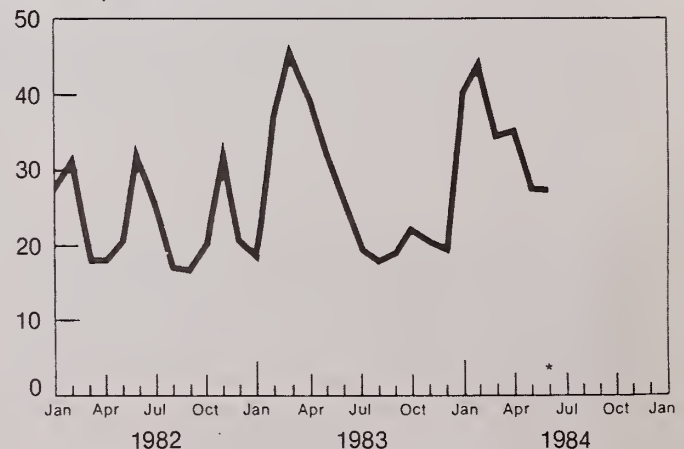
Dollars per cwt.



*15th of June

Tomatoes: F.O.B. Shipping Point Prices

Dollars per cwt.



*15th of June

Grower prices eased during the second quarter of 1984 as spring production brought more domestic supplies to market. The second-quarter average price index for fresh items fell 27 percent, from 170 to 124 (1977=100). During the first half of 1983, the quarter-to-quarter averages rose 21 percent, from 119 to 144. This reversal came from both the 6-percent larger spring 1984 acreage and the vastly improved weather in California, Arizona, Florida, and Texas compared with last year.

The January-to-March 1984 accumulated shipments of fresh tomatoes were 85 percent below the 1980-83 average, but by June, they moved up to within 5 percent. Also California iceberg lettuce shipments were at average levels after first-quarter 1984, but were over 5 percent above average by June. In April, new-crop potatoes were 8 percent of the total shipped, compared with 4 percent last year. In June, the proportion was 62 percent, compared with 50 percent last year. Thus, good weather this spring brought an earlier harvest and larger supplies, which caused the precipitous drop in second-quarter fresh vegetable prices.

Third-Quarter Acreage Up Slightly From 1983

A 1-percent increase in third-quarter harvested acreage for the seven major fresh vegetables is forecast for the major States. Broccoli, cauliflower, and lettuce acreage is down 5 percent, and carrot, celery, sweet corn, and tomato acreage is up 4 percent. Acreage increases are expected in Washington (8 percent), California (0.5 percent), New York, Connecticut, Massachusetts, New Jersey, Pennsylvania, Minnesota, Wisconsin, North Carolina, and Virginia (4 percent).

Honeydew melon acreage in California is up 9 percent, while in Arizona it is down 10 percent. The total honeydew melon acreage in both States is up 7 percent. Total summer onion production is scheduled for a 3-percent increase, the net result of a 4-percent increase in storage onions and a 1-percent drop in nonstorage onions.

PROCESSED VEGETABLES

Processing Prices Up

The average wholesale price index for canned vegetables was unchanged in July, resisting the downward pressure that accompanies a new season. The 1983 crop of major canning items was smaller than 1982's, and the dwindling stocks put upward pressure on prices. After leveling in April and May, canned vegetable wholesale prices rose 1.4 percent, reflecting delayed planting from cool, wet weather in the eastern United States.

First-quarter 1984 frozen vegetable wholesale prices leveled, but began increasing during the second quarter. This increase in second-quarter wholesale prices over the first quarter contrasts with last year, when prices decreased in the second quarter.

Higher Prices Stimulate Increases In Processing Acreage

Based on contract intentions, the evidence points to an increased 1984 pack of canned snap beans, sweet corn, green peas, and tomatoes. Revised figures indicate an 8.8-percent increase in acreage for canning snap beans,

sweet corn, and green peas, and a 3-percent increase in contracted tomato acreage.

Freezers' intentions indicate an increased pack of frozen snap beans, sweet corn, and green peas. Season-ending cold storage holdings are below a year earlier, partly because of the high 1982/83 production, but also because of brisk demand in the first half of the 1983/84 season.

In Wisconsin, the leading producer for processing snap beans, processors will contract 3 percent more acreage and claim 35 percent of the U.S. total of 205,550. In 1983, processors bought snap beans from the open market, 8 percent for canning and 2 percent for freezing. If this happens again this year, total U.S. acreage would be about 218,000, 6 percent more than last year.

Wisconsin and Minnesota sweet corn growers lead the Nation in production. Their combined area increased 20,200 acres to reach 256,600, 57 percent of U.S. total. The U.S. total acreage of 450,300 in 1984 is 9 percent more than in 1983. Even with the small proportion of noncontracted acreage originally expected, 1984 acreage will reverse the decline from 1982 to 1983.

Along with Wisconsin and Minnesota, Washington is a leader in green pea production, and together they scheduled 10 percent more acreage than last year. Maryland growers, in a State with less than 1 percent of total U.S. green pea acreage, cut back 10 percent, while growers in Delaware reported the largest increase, 21 percent.

Green Beans, Peas, and Corn

Wholesale prices for canned green beans, peas, and corn rose during 1983/84 at a steady 4.1-percent quarterly rate. Contrasted with a steady 0.8-percent decline in 1982/83, the outlook for further price gains spurred processors to contract 623,280 acres, 8 percent more than the 577,460 acres actually contracted in 1983. Last year, processors also packed these items from noncontracted or open-market acreage, 2 percent of the total, lowering the total acreage 3 percent from 1982. The reduced 1983 acreage led to a 10-percent reduction in total pack, and the recent moderated decline in canned vegetable consumption have left processors in a firm buying position for the coming season.

July 1 canned corn stocks could be 20 percent less than last year's, which were 50 percent more than 1982's. If adverse weather in the Midwest reduces yields on contracted acreage, then open-market buying could pick up, and depending on the availability of noncontracted production, the price of canned sweet corn could sustain its current strength.

May 1 canned green and wax bean stocks are 36 percent less than in May 1983 and nearly 50 percent less than in 1982. Last year, 6,587 cases were moved between May 1 and July 1. At the same rate this year, carryover stocks will be severely depleted. Also adverse weather has hampered yields in the Midwest and East. The estimate of 140,460 acres under contract is 5 percent larger than the actual contract total for last year, but 8 percent of the total 145,550 acres in 1983 were noncontractual. Because of the poor weather and low carryover stocks, price increases are expected to mitigate demand. Canned bean buyers will pay the price for high-interest inventory costs and limits on supply placed there by Mother Nature.

The July 16 USDA report of processing pea production estimated contracted acreage was down 5 percent from the June 20 estimates of intentions. The earlier estimate of 352,950 acres was revised to 334,150, and comprised a drop in all States. The net effects of good weather in Washington, moderate weather in Minnesota and Wisconsin, and poor weather in the Northeast, coupled with an 11-percent acreage increase, resulted in a 486,190 ton harvest (shelled)—17 percent more than 1983. The average U.S. yield was 1.46 tons an acre, 6 percent above 1983, but 10 percent below 1982's 1.63 tons an acre.

Low ending stocks of processed peas, and the prospect of continued strength in the overall economy, led wholesalers to post higher July wholesale prices for canned green peas compared with July 1983. That trend will hold if distributors ration their stocks to boost ending stocks for the 1984/85 season.

The total of contracted acreage intended for freezing snap beans, sweet corn, and green peas is 60 percent of the amount contracted for canning these items. The 10- to 11-percent increase in freezing-vegetable acreage maintains the rank of green peas (153,620), sweet corn (136,840), and snap beans (59,150).

Tomatoes

Tomato processors contracted 7.6 million tons in 1984, 10 percent more than in 1983, indicating they enjoy an improved position over last year. April 1 stocks of most tomato items are less than in 1983. Wholesale prices of tomato products have improved this season, after dropping at a 1.4-percent quarterly rate last season. Since second-quarter 1983, wholesale prices have risen, but not to their second-quarter 1982 peak. Product movement since July 1983 has improved over last year for tomato catsup, paste, and concentrated items, which have led over such items as canned tomatoes, chili sauce, and others.

California tomato processors intend to contract 6.6 million tons, 12 percent more than last year and 87 percent of total contracted U.S. tonnage. Other States increasing contracted tonnage are Indiana (21 percent), Maryland (41 percent), and New Jersey (20 percent). Delaware, Michigan, Ohio, and Pennsylvania report a combined decrease of 12 percent. Colorado and Virginia processors report no change in total State tonnage intended for contract.

California whole-peeled tomatoes are trading in a firm market and the pack is expected to be heavier than last year. The result will be some easing of prices in August to September. Other tomato products are trading in a softer market and growers may see the effects in lower spot-market buying.

The 1983/84 season's tomato product imports are bound for new highs and may be more than one-third greater than last season's. Tomato product imports soared during the 11 months from July 1983 to May 1984 to 429 million pounds, 41 percent greater than a year earlier. If the June figures put U.S. imports the same as a year ago, the total for this season would reach a record 453 million pounds, 28 percent greater than the previous record of 354 million set in 1981/82.

The May import figures hint at Mexico's and Portugal's strong position in the tomato paste trade of 30 million pounds, nearly double the May 1983 figure. Mexico and Portugal make up 82 percent of the May 1984 figure. Israel remained the dominant source of imported sauce, shipping 65 percent of the 1.5 million pounds to the United States. In the other products group, chiefly canned tomatoes, Italy was the largest exporter to the United States with 27 percent of the 19 million pounds.

Current world estimates for processing tomato production in 1984 are 13 percent higher than the total for 1983. North American production is slated for a 10-percent increase and the Mediterranean Basin for an 15-percent gain. Italy, ranking second to the United States, will increase production 17 percent.

The outlook for sustained high real interest rates in the United States, for continued relative strength of the U.S. dollar, plus expanded overseas tomato production, point to a continuation of the recent trend of climbing tomato product imports. U.S. tomato processors are expected to seek relief in the highly competitive international market. As for the price level of processed tomatoes, a continuation of the upward trend over the next few months depends heavily on the size of this year's crop. Continuing high real interest rates also will increase storage costs. Thus distributors may seek only moderate price increases as products are diverted to the marketplace.

MUSHROOMS

The increased imported mushrooms in the United States has lowered the grower price of processing mushrooms throughout the second quarter of 1984. Beginning in April, the price range for number 1 grade raw stock in the Kennett Square, Pennsylvania, area dropped from 64-67 cents to 50-53 cents a pound. A steady drop in prices during the second quarter of this year is a contrast with the previous 2 years, when prices were reasonably steady under the influence of stepped up import protection.

Canned mushroom imports will be about 30 percent greater this season because of increases from all exporters except China. Trade sources hint that Chinese production this year was less than expected. Taiwan's exports to the United States, however, are running 40 percent higher than last year and should increase Taiwan's share of the import trade from 35 to 37 percent. The surge in imports is a result of a strong U.S. dollar and the current robust U.S. economy. Consequently, imports are gaining in proportion to total U.S. consumption from 50 percent in first-quarter 1983 to 60 percent during first-quarter 1984.

The 1982 *Census of Agriculture* reveals a downward trend in the number of Pennsylvania mushroom operations, but an upward trend in the total square footage under cultivation. From 1978 to 1982, the number of mushroom farms decreased from 391 to 347, a 3-percent annual rate of decline. On the other hand, average square footage under cover increased 5.6 percent annually to 122,876 per operation. Chester County, Pennsylvania, with 233 mushroom farms in 1982, accounted for 53 percent of the State's total square footage.

POTATOES

Overview

Production Higher For All Seasonal Groups

From a production standpoint, 1984 is definitely a good year for potatoes despite weather-related problems in some areas. Total acreage for all seasonal groups, at 1.3 million acres, is 5 percent above 1983. Revised estimates place the spring crop at 23.2 million cwt, a 27-percent increase from 1983. Summer production is forecast at 22.6 million cwt. While this represents a 21-percent hike over last year's drought reduced harvest, it is actually a return to normal summer outturns. The summer's yields are more indicative of the historical average, and are expected to be about 210 cwt per acre.

Weather has plagued the 1984 summer crop. High temperatures in June stressed potatoes in California, Indiana, and Ohio. A rainy spring delayed plantings in Colorado, Virginia, and Michigan. Minnesota and Iowa growers expect a good crop, despite a few problems earlier in the season. However, production in these States exceeds that of last year, while the five leading States—California, New Mexico, Michigan, Texas, and New Jersey—have gains of 3, 62, 17, 16, and 26 percent, respectively, from 1983.

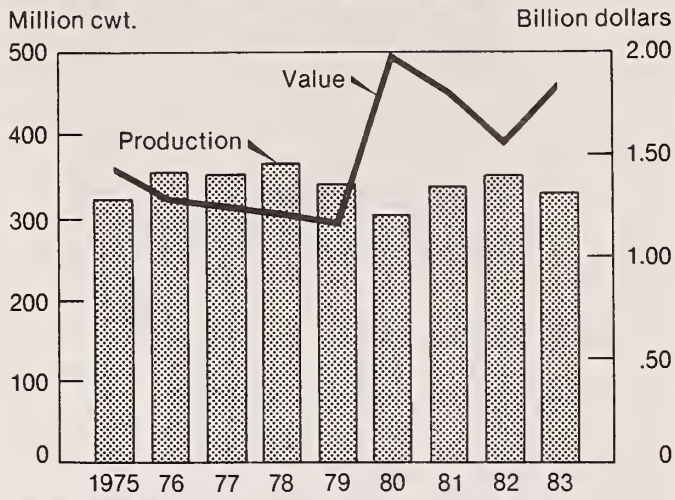
Harvested acreage for the fall crop is expected to total 1.09 million acres, compared with 1.05 million a year earlier. The gains are not all across-the-board. This fall, the Western and Central States expect to harvest 594,000 and 340,000 acres of potatoes, respectively, or 7 and 4 percent more than in 1983. Even among these groups, not all States planted more acres, while key States such as Washington and Oregon showed strong acreage gains, plantings in Wisconsin declined.

The eastern States expect to harvest 158,000 acres, 4 percent less than last year. Maine not only planted less, but heavy June rains caused some seed rot and planting delays. The rainfall continued through July, but some local sources are still confident that yields will be good and that production possibly could equal that of last year. New York acreage dropped, and some Long Island farmers switched to alternate crops.

There has been some shifting among types of potatoes planted in each State. For example, on a proportionate basis, Maine increased russet plantings 3 percent. This resulted in an actual increase of 10 percent in area planted to russets. Similarly, Wisconsin increased its proportion of round white potato plantings 6 percent from 1983, but this resulted in an actual increase of 21 percent. Other States like Pennsylvania, New York, Oregon, and Washington continued to plant either all round white or all russets. For the 11 major fall States, red potato acreage increased proportionately from 1 to 6 percent, which resulted in 62,000 acres planted. Russet plantings declined to 64 percent, but 657,000 acres were in fact planted, and round whites held their proportionate share of 30 percent or 308,000 acres planted.

A total of 189,718 acres for seed were entered for certification, compared with 183,408 in 1983. Allowing for a 5- to 7-percent rejection rate, the actual amount of certified

Potatoes: U.S. Production and Value



seed potatoes in 1984 should still be about 2 to 5 percent above last fall.

Demand for Potatoes Fresh and Processed

The 1983 pack of all frozen potato products totaled 4.5 billion pounds, up 3 percent from 1982. Frozen french fries were up 4 percent from 1982. Of the total french fry pack, the food service portion exhibited the greatest increase, while retail processing declined 12 percent.

Cold storage holdings of frozen potatoes were estimated at 835 million pounds on July 1, still running about 18 percent less than a year ago. Stocks of frozen french fries totaled 666 million pounds, and trailed behind last July's holdings 21 percent.

Shipments of tablestock potatoes, old and new season, through July 21 showed a mixed performance. Old season shipments (fall crop 1983) totaled 101 million cwt, down 6 percent from 1982/83. New season shipments are running higher, 25 percent more than last year. New season chipper potatoes, 24 percent more than in 1982/83, while old season shipments were 12 percent less than last year.

U.S. exports of fresh potatoes from October through May totaled 30,809 metric tons, up 1 percent from the comparable period a year ago. Exports to Canada were approximately 2,000 metric tons less than last season. However, this loss was offset by shipments to Mexico, which were 2,920 metric tons more than in 1983. Seed exports (October through May), at 4,143 metric tons, were 4 percent below last season. Seed exports to Canada were almost half of 1983 levels, but sales to Mexico and Jamaica partially compensates for the decline. Exports of frozen potatoes (of which french fries form the largest share) were 43,692 metric tons, up about a fourth more than last year. Japan remains our leading export market, taking 69 percent of all frozen potatoes exported.

U.S. imports of fresh, seed, and frozen potatoes follow the same pattern as exports. Imports of fresh potatoes, largely from Canada, were down 15 percent from

October-May 1983, and seed imports declined by 1 percent. Imports of frozen potatoes, at 11,576 metric tons, were 31 percent higher than last season. Again, Canada was the major supplier.

The Canadian Government ruled that stripper-type potatoes with netted or russeted skins from Washington State were unfairly competing with Canadian potatoes. Hence, anti-dumping levies of varying rates were assessed against shipments of these potatoes, but could be removed if potato supplies in British Columbia (the most affected province) are not adequate to meet the needs of its consumers. The case has been referred to Revenue Canada for periodic review of the duties.

Prices Retain Strength Through Mid-1984

Grower prices for U.S. potatoes shot up to \$7.41 in June, the second highest June quote on record. Through the first 6 months, prices averaged \$6.66, 49 percent above the low levels in 1983. California and Florida growers had the highest averages for first-half 1984, while Washington State had the lowest.

Higher grower prices were passed along to consumers. Retail prices for round white potatoes were almost a third higher during January-June 1984 than a year ago. Retail prices for frozen french fries were 9 percent higher than first-half 1983, and potato chips were up 2 percent. The CPI for fresh potatoes averaged 391.4 (1967=100) in June, compared with 304.7 last year. The midyear average for the CPI stood at 366, a 40-percent rise above the comparable period a year ago. Meanwhile, the Producer Price Index (PPI) for frozen french fries, at 302.4 (1967=100), was running about 10 points above January-June 1983.

Outlook

Fall production, based on the current acreage estimate and a 5-year yield average, may range from 300 to 310 million cwt. Total production for 1984 will likely average between 350 and 360 million cwt.

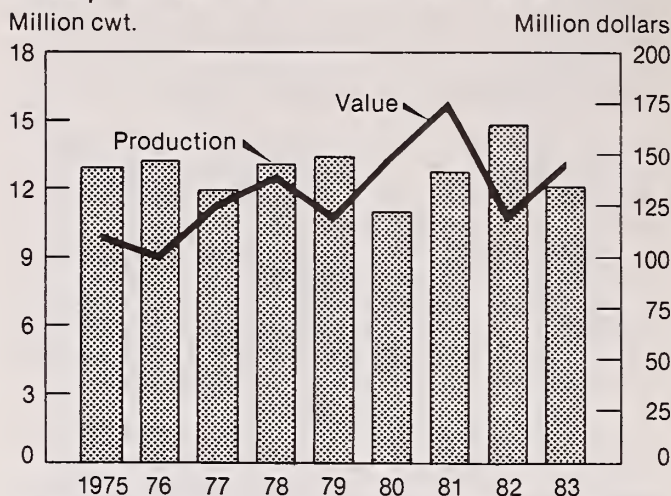
Given the larger outturn, it is highly probable that grower prices will take a downward turn during the latter half of 1984. Farmers could see prices average between \$4.50 and \$4.90 per cwt of potatoes through July-December. The drop in grower prices will put downward pressure on the CPI and retail prices for fresh potatoes. The CPI for the later half of the year could run 1 to 5 percent below second-half 1983. The causes for the higher rate include the higher prices during the summer months and good demand for tablestock potatoes. The PPI for frozen french fries will weaken compared with first-half 1984 levels, but will also remain 2 to 6 percent above July-December 1983.

SWEETPOTATOES

Larger Crop, Lower Prices

Sweetpotato growers expanded acreage only minimally this year. Estimates place harvested acreage at 107,900 acres, a 5-percent increase over the diminutive 1983 crop. Production in 1984 will likely average between 12.3 and 13 million cwt.

Sweetpotatoes: U.S. Production and Value



In North Carolina, the leading producer, harvested area is expected to total 40,000 acres, up 3,000 from 1983. Although wet fields delayed planting, it was completed by early July. In Louisiana planting was slightly ahead of schedule and the crop is reported to be in good condition. California and Texas encountered some weather-related setbacks, but prospects appear good in both States.

Through July 21, shipments, at 3.1 million cwt, were 17 percent less than the previous year. Unloads for the old season trailed even further behind the 1982/83 movement. Sweetpotato unloads for 1983/84 totaled 1.6 million cwt, compared with 2.1 million the previous season.

The canned pack (July 1, 1983 to April 1, 1984) was estimated at 5.3 million cases and stocks were placed at 2.1 million cases (basis 24/303's). Supplies, at 7.5 million cases, were 14 percent less than the previous year. Canned prices for Louisiana cut sweetpotatoes were quoted at \$10.50 (basis 24/303's), unchanged from a year ago.

Grower prices were exceptionally good through the first half of the year, as might be expected given the short 1983 crop. During this period, farmer's received an average of \$18.42 per cwt, compared with \$9.40 in 1983. Grower prices for sweetpotatoes peaked in May at \$23.50. Prices dipped to \$12.50 in June as the California crop became available. California prices are typically the only ones quoted in June, and were unchanged from a year ago. Season-average prices for 1984/85 will likely fall between \$10 and \$12.50 a cwt. During the second half of 1984, farmers can expect to see sweetpotatoes selling around \$8.50 to \$10.50 a cwt.

PULSES

Dry Edible Beans

Acreage Up, But Exports Sagging

Harvested acreage for all types of dry edible beans is 24 percent greater than a year ago. Indicated acreage for 1984 rose to 1.41 million acres, compared with 1.14 million in 1983. All 13 States that produce dry edible beans reported acreage increases. The four key commercial

States—Michigan, North Dakota, California, and Colorado—registered acreage gains of 11, 25, 26, and 13 percent, respectively, over a year earlier. Plantings were behind this year because of heavy spring rains that necessitated some replanting, but the dry bean crop appears to be in good condition.

Dry bean sales are currently experiencing seasonally weak demand. Exports of dry beans during September-May totaled 199,000 metric tons, compared with 236,000 tons the previous season. As late as 1982, Mexico was still a net importer of dry beans, contracting large amounts from the United States. Now, hard pressed by debt and peso devaluations, Mexico has become a net exporter of dry beans. Reports indicate that Mexico could ship as many as 50,000 to 100,000 metric tons this year.

Argentina, another competitor for U.S. dry bean markets, expects 1984 production to rebound from last year's weather-reduced crop. The revised estimates for this year place Argentina's output at 190,000 metric tons, and forecast the 1985 crop at 250,000. The three major categories of beans produced in Argentina are blacks, alubias, and red and others. Blacks are sold to Venezuela and Brazil, markets often sought by U.S. dealers, while alubias compete with U.S. Great Northerns in southern Europe. Argentina has exported red beans to Honduras and Nicaragua, but civil unrest has undermined those markets.

Exports Affect Bean Producers

Preliminary results of the 1982 *Census of Agriculture* indicate that during 1978-82, the number of dry edible bean farms in major bean-producing States increased 4.3 percent annually (see table). Combined with 1.8-percent growth in per-acre yields and 2.1-percent growth in bean acreage per farm, bean production increased 8.2 percent annually during a period when export demand increased dramatically.

Prices Weaken, But Still Above 1983 Levels

Grower prices for dry edible beans averaged \$21.18 a cwt through the first half of 1984, compared with \$13.27 the

previous year. During the second quarter, they averaged \$21.13, slipping in May, but recovered to \$21.90 in June. In California, growers received a year-to-date high of \$35.20 in June, and prices were 43 percent more than during January-June 1983. Michigan grower prices averaged 80 percent above their 6-month level a year ago.

Farm numbers, acreage, and average per farm dry edible bean¹ acreage in eight major States, 1982 and 1978

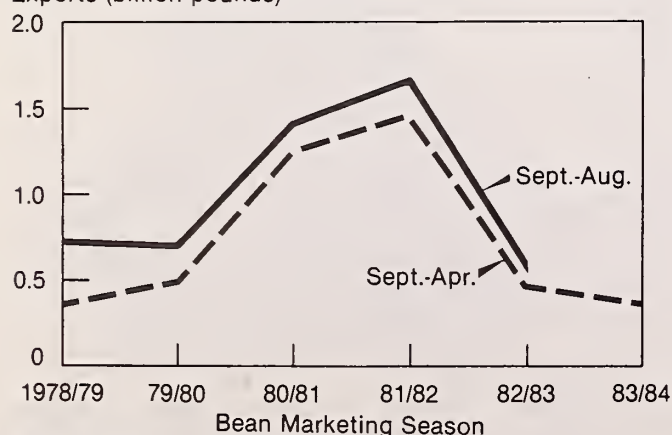
State		Farms	Acres	Average bean acreage
California	1982	1,120	133,022	119
	1978	958	127,065	133
	% change	+17	+5	-11
Colorado	1982	1,682	180,586	107
	1978	1,399	149,746	107
	% change	+20	+21	0
Idaho	1982	2,061	151,480	73
	1978	2,275	167,910	74
	% change	-9	-10	-1
Michigan	1982	5,841	502,275	86
	1978	5,218	441,925	85
	% change	+12	+14	+1
Minnesota	1982	754	73,702	98
	1978	391	30,673	78
	% change	+93	+140	+26
Montana	1982	130	6,681	51
	1978	136	6,292	46
	% change	-4	+6	+11
Nebraska	1982	1,723	206,180	120
	1978	1,333	120,476	90
	% change	+29	+71	+33
North Dakota	1982	1,775	239,474	135
	1978	985	112,200	114
	% change	+80	+113	+18
Total	1982	15,086	1,493,401	99
	1978	12,695	1,115,287	91
	% change	+19	+29	+9

¹Excludes dry lima beans.

SOURCE: Bureau of the Census, Department of Commerce, 1982 Census of Agriculture, preliminary reports.

Dry Edible Beans: Exports 1978-1984

Exports (billion pounds)

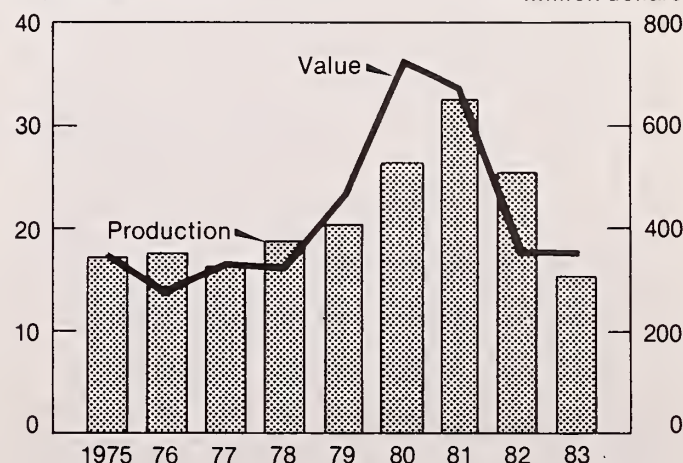


Source: Bureau of Census

Dry Edible Beans: U.S. Production and Value

Million cwt.

Million dollars



Colorado and North Dakota growers received prices 61 and 79 percent higher, respectively, than last year's first-half averages.

F.o.b. prices for most types of dry beans have retreated since the beginning of the year, not unlike grower prices. Pinto beans for late July were \$18.52 a cwt (three-State average), down \$3 from the first of the year, but 2 percent above 1983. Great Northerns from Nebraska and Wyoming dropped 12 percent from early year quotes, and through July were running about \$9 below year-earlier prices. Michigan pea bean prices were up 18 percent over last year, but were about even with January quotes. July f.o.b. prices for pinks and reds were similarly below early 1984 and year-ago levels, July large lima bean prices soared 72 percent above 1983.

Production Likely To Rise, Prices To Fall

Total dry bean production for 1984 will likely average between 18 and 20 million cwt. Production for all types of beans is expected to be greater than a year earlier because each State planted more acreage to beans.

In 1984, season-average grower prices for all varieties of dry beans will probably run from \$17.50 to \$20 per cwt. The larger crop will bolster stocks, and the continued strength of the U.S. dollar and the expansion of foreign production will limit any great gains in developing foreign markets. Third-quarter prices should remain 3 to 7 percent above second-quarter levels, but begin to drop after harvest.

Dry Peas and Lentils

Acreage Down, Market Generally Sluggish

Dry pea and lentil acreage declined for the second consecutive year. The American Dry Pea and Lentil Association estimated that 264,343 acres were planted in these crops, compared with 292,385 acres in 1983 (excluding Austrian winter peas). Only green peas registered gains, both regular and small sieve. Yellow pea acreage was less than half the previous year's, and lentil acreage was down approximately two-fifths.

The export markets continue to be a major determinant of acreage and prices. The September-May total for dry pea exports, at 91,682 metric tons, was down 5 percent from last year. The domestic green pea market has ongoing export inquiries from India, Venezuela, Taiwan, and South Africa. The export credit guarantee program has authorized the sale of green peas to Colombia and India. By September 30, \$1.7 million worth of green peas will be shipped to Colombia and \$2 million to India. Reduced acreage and a tentative Government tender for yellow peas (or possibly green peas) provided a firm undertone for this market. Lentils are bolstered by limited offerings, late seeding, reduced acreage, and a hint of improved demand. Turkey, however, appears to have made permanent inroads into U.S. lentil exports. Unless some relief appears in the form of new sales and/or a declining dollar, lentil sales will likely continue to languish. Light trading for Austrian winter peas remains

the norm. However, some shipments are going to the Far East, and there are reports that new crop prospects look good.

Grower prices for the first half of 1984 varied. Lentil growers received an average of \$14.71 per cwt, 20 percent more than the comparable period a year ago. Austrian winter and green pea grower prices are running 11 and 2 percent, respectively, less than during the first 6 months of 1983. Yellow peas averaged 9 percent below the January-June level a year ago. Tight supplies seemed to give prices a greater boost than actual sales.

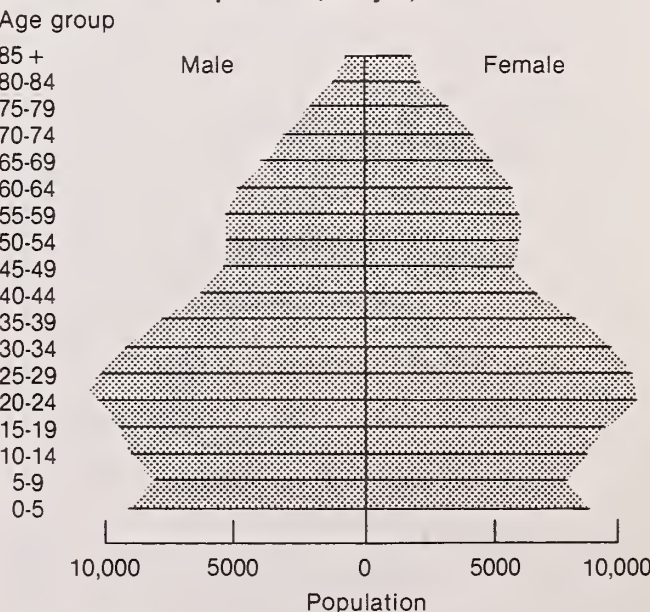
Price Patterns Likely To Persist During Second-Half 1984

No notable price gains are expected during the latter part of 1984. Lentil prices should gain further strength, climbing back to equal, or possibly exceed, July-December 1983 levels as much as 10 percent. Green pea prices will dip seasonally as harvest nears, running about even to 5 percent below last year. Sharp acreage cutbacks will lift yellow pea prices by 10 to 20 percent above current levels, while Austrian pea prices could recover if prospective sales materialize.

PER CAPITA CONSUMPTION

The 1983 per capita consumption estimates include several important changes that improve the reliability of the aggregate series. Because of 1982 program cutbacks in the USDA's crop reporting schedule, production estimates were discontinued for fresh artichokes, asparagus, snap beans, brussel sprouts, cabbage, escarole, green peppers, spinach, cucumbers, eggplant, garlic, watermelons, and cantaloups. Also, the minor fresh vegetables group, which was discontinued by USDA in 1974, is no longer allocated to miscellaneous fresh vegetables. Thus, 1982 and 1983 civilian per capita consumption of total fresh vegetables is the sum of tomatoes, broccoli, carrots,

Profile of U.S. Population, July 1, 1983



Source: Bureau of Census

lettuce, cauliflower, celery, corn, onions, and honeydew melons. Per capita consumption of canned pumpkin and squash, and spinach is omitted for 1983 because of data reporting difficulties.

Civilian per capita consumption of vegetables is a ratio of apparent consumption to total civilian population. Apparent consumption is the sum of domestic production,

plus carryover stocks and imports, minus ending stocks, exports, spoilage, and military use. Of course, the ratio is a simple average and consumption patterns of different age-sex categories do not weigh-in to the calculation. A population pyramid is drawn using July 1983 data from the Bureau of Census. A bulge in the population pyramid for the 20-35 year-old age group illustrates its importance to general consumption patterns.

Household Characteristics and the Demand for Vegetables and Potatoes¹

David M. Smallwood
and
James R. Blaylock²

Abstract: Income and other household characteristics affect per person at-home expenditures for 18 vegetable and potato product groups. Data comes from USDA's 1977-78 *Nationwide Food Consumption Survey*, which offers the most recent and comprehensive data available on household food consumption patterns. Generally, higher income households spend less per person on dried vegetables; fresh, canned, and dehydrated potatoes; and canned vegetables for at-home use than do lower income households, but spend more on fresh and frozen vegetables; vegetable juice; and potato chips, sticks, and salads. For example, a 10-percent increase in income is associated with about a 3.3-percent decline in at-home dried vegetable expenditures, but nearly a 5-percent increase for frozen vegetables. Geographic location, season, race, and the age composition of households also affect spending.

Keywords: Vegetables, potatoes, household expenditures, income, socioeconomics, 1977-78 *Nationwide Food Consumption Survey*.

Socioeconomic and demographic household characteristics, such as income, region of residence, race, season, and age composition of the household affect the retail demand for vegetable and potato products. Changes in consumer demand can be estimated from changes in these individual characteristics. Segments of the population can also be identified for which expenditures on vegetable and potato products are high or low relative to the national average. To illustrate let's consider how changes in income affect demand.

As income changes (as well as other demand factors), two components in the retail market demand for vegetable and potato products are also caused to change: (1) How many consumers use the product over a given period; and (2) How much of the product consumers use on average. Knowing about the size of these two components has obvious implications for developing product marketing strategy and for measuring the potential for market growth or decline. For example, certain marketing strategies may be more successful if directed toward

infrequent users, while others may be more successful if directed toward inducing current users to consume more.

Measures of the two demand components for vegetable and potato products are computed using data from the 1977-78 USDA *Nationwide Food Consumption Survey* (NFCS). The survey is based on a national sample of nearly 15,000 households and was conducted over a 1-year period (April 1977 thru March 1978). It contains the most comprehensive, detailed data currently available on the food consumption patterns of American households. During the survey, trained interviewers solicited information on the kinds, amounts, values, and sources of foods used from home food supplies during a 7-day period³.

From the survey data, frequency of product use per household was derived. Tobit analysis, a statistical procedure, was used to quantify the relationship between the two demand components and household income, race, age composition, region of residence, and season of the year.

¹Based on USDA, ERS, Technical Bulletin no. 1690, "Household Expenditures for Fruits, Vegetables, and Potatoes." ²Agricultural economists, Economic Research Service, USDA, (202) 447-9200.

³Because we emphasize goods moving through the retail market, our analysis is limited to purchased products. Products that were produced at home or received as a gift or for pay are excluded.

Income

Frequency of use makes up a large component of the weekly aggregate demand for most vegetable and potato products. It accounts for nearly 27 percent of the total market demand response (which means changes in the amount and frequency of consumption) for all these products, taken as a group. As expected, frequency of use is generally greater for disaggregate product groups than for the larger aggregate groups. For example, it accounts for 45 percent for the aggregate fresh vegetable group; 76 percent for dark-green vegetables; 73 percent for deep-yellow vegetables; 71 percent for tomatoes; 58 percent for other fresh vegetables; and 55 percent for light-green vegetables (see table 1).

Household demand for vegetables and potatoes shows little response to changes in income. In an average American household, a 10-percent increase in income generates less than a 1-percent increase in expenditures for vegetable and potato products. So as income rises, the share spent for these products declines. What this implies is a market demand insulated from certain cyclical fluctuations of the general economy. Year-to-year fluctuations in the vegetable markets seem to arise more from production and marketing changes than from income-related demand factors.

Frozen vegetables and vegetable juices respond most to changes in income. A 10-percent increase in income raises expenditures for frozen vegetables nearly 5 percent and vegetable juices nearly 3 percent. At the other extreme, the share spent on dried vegetables, such as dried peas and beans, falls slightly more than 3 percent. Increased income also reduces the use of other products, such as fresh, canned, and dehydrated potatoes, and canned vegetables. However, for several of these, the income response is too small to be economically significant.

In general, higher income households increasingly prefer frozen products to canned. Higher income households consume a larger percentage of frozen vegetables than do lower income households.

Demographic Effects

The household demand for vegetable and potato products varies substantially by region of residence, race, season, and household age composition. Our results can be used to examine: (1) the potential for selected markets based on area demographics, (2) the effects of population changes on markets over time, and (3) the frequent or infrequent users of vegetable product groups. Major findings are briefly discussed for each household characteristic, which is examined separately while all other factors are held constant at respective averages.

Region

Expenditures on vegetable and potato products vary substantially by region (table 2). In the Northeast, per person expenditures for all vegetable and potato products combined are the highest, and lowest in the North Central region. For individual product groups, this pattern holds true for fresh and frozen vegetables but not for

other categories. Dried vegetable expenditures are lower in the Northeast than in the North Central region while higher than both regions in the South and West. Potato expenditures are highest in the North Central region and lowest in the West.

Spending across regions seems more uniform for the aggregate product groups than for the subgroups. This is partly because of regional differences in the mix of products purchased. Some of the apparent variation comes from relative price differences and the prevalence of home gardening. For example, during the survey period, vegetable prices were highest in the North Central region and lowest in the West. During the survey, the share of households that consumed food produced in home gardens was highest in the North Central region (35.3 percent) and lowest in the West (18.8 percent). In the South, 30 percent of the households consumed some form of home-produced vegetable or potato product compared with 19.2 percent in the Northeast.

The Bureau of Census has made demographic projections based upon past trends that suggest the population in the Southern and Western regions will rise between 1980 and 1990 and will drop in the Northeastern and North Central regions. These shifts may modestly affect overall per capita spending for vegetables and potatoes because changes in the North Central and the Northeast regions may offset each other. On a market level, however, such geographic shifts may cause changes in the areas where products are produced and distributed.

Season

Average aggregate spending for vegetables and potatoes is surprisingly stable year-round (table 3). However, beneath this stability is considerable switching between fresh and processed product, leading to a much greater variation in seasonal expenditures for product subgroups.

Aggregate expenditures are roughly 5 to 8 percent higher during winter and spring than during summer and fall. Expenditures on fresh tomatoes are 31.4 percent lower in the fall, 17.1 percent lower in the winter, and 6.5 percent lower in the summer than in the spring. A similar pattern holds for the light-green and other fresh vegetables. This is partly influenced by seasonal variation in prices, farm production, and home gardening. Data from the NFCS reveal that almost 15 percent of the value of all vegetables and potatoes and 35 percent of fresh tomatoes consumed at home are produced in home gardens. In a recent study, Blaylock and Gallo predict home gardening will increase its influence on vegetable expenditure patterns.

Race

Black and other racial minorities spend more per person each week for fresh and dried vegetables and fresh potatoes than do whites (table 4). For all the vegetable and potato products analyzed, blacks spent an average 4.1 percent more, and nonwhite-nonblacks 20.2 percent more than whites. The largest difference among racial groups is for fresh, dark-green vegetables. Blacks spend about 144 percent more per person, and nonwhite-nonblacks about 73 percent more per person, on this product group than whites with similar socioeconomic characteristics.

Blacks, also spend approximately 65 percent more for dried vegetables, and nonwhites-nonblacks 148 percent more, than whites.

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In 1950, blacks were about 10.0 percent of the population, and nonblacks about 90.0 percent. Today, blacks make up about 12 percent and nonblacks about 88 percent. These trends are expected to continue into the next decade. The Bureau of the Census projects that blacks will comprise about 12.2 percent and nonblacks about 87.8 percent of the population in 1990. This trend may lead to a small, gradual increase in average per person expenditures on vegetables and potatoes.

Age Composition

A consumer's age influences the amounts and kinds of vegetables purchased (table 5). Generally, per person expenditures increase with age up to about 65 years and then taper off slightly. For example, compared with vegetable expenditures by the 40 to 64-year age group, expenditures are 35 percent less for those 0-2 years, 20 percent less for those 3-12 years, 13 percent less for those 13-19 years, 7 percent less for those 20-39 years, and 3 percent less for those 65 years and over. This pattern holds for most fresh vegetables except tomatoes and fresh, deep-yellow vegetables. For tomatoes, households with individuals aged 3 to 39 years spent more per person than those aged 40 to 64. For deep-yellow vegetables, households with individuals 3 to 12, or over 65, spent more per person than those with only persons 40-64 years old. As might be expected, teenagers spend more on potato chips, sticks, and salads than do the elderly. But the biggest spending difference among age groups is for canned potatoes. Households with infants and toddlers spend over 2,000 percent more on canned potatoes than households without young children. This is primarily because infants consume much more canned sweetpotatoes (as "baby food") than do adults.

Because various age groups spend quite differently for vegetables and potatoes, gradual changes in the population's overall age structure can influence average per capita consumption. For instance, the U.S. population increased about 18 percent between 1950 and 1960. During that time, those born during the post-World War II baby boom had grown to children's ages, increasing that segment of the population dramatically. Because this age group eats fewer vegetables and potatoes, per capita consumption was lowered. However, during the 1960's and 1970's the birth rate slowed, reducing the number of preteens, and the post-World War II babies had grown into teenagers and young adults, increasing that population segment. The number of senior citizens also increased faster than the total population. These changes increased per capita consumption of vegetables and potatoes.

Bureau of the Census projects that the median age of the population will increase about 4 years from 1978 to 1990. Between 1980 and 2000, those between 40 and 64 years are projected to increase from 24.9 percent of the popula-

tion to 31.0 percent. As the average age of the population increases, total vegetable and potato usage should also increase, especially during the 1980's and 1990's. Of course, the effects on particular products will vary.

Summary

The number of consumers, the frequency of product usage, and the amount of product consumed per eating occasion influence total household expenditures on vegetable and potato products. Household income, race, age structure, geographic region, and season of the year also are shown to influence the level and frequency of use. Knowledge of these variables can be used to estimate consumer demand in particular markets, to simulate how changing household characteristics over time affect consumer demand, and to identify product expenditures and frequency of use by target population groups.

In general, the effect of income on the demand for vegetables and potatoes is found to be small and of little economic significance except for such product groups as frozen vegetables, frozen juices, and dried vegetables. The first two groups are positively related to income while the latter group is negatively related. Assuming a 3-percent average annual increase in consumer purchasing power over the next 10 years, a modest 0.3-percent annual increase in per capita demand for vegetables and potatoes appears likely. Consequently, future industry growth arising from improving economic conditions is likely to be limited to particular fresh, gourmet products and some processed products.

Population growth is likely to be the largest single source of future demand growth for vegetables and potatoes. The Census projects an 8- to 10-percent increase in population during the next 10 years. Consequently, consumer demand should increase similarly. In addition, the gradual aging of the population will increase the consumption of most vegetables. Geographic shifts in the population from the Northeast and North Central regions to the West and South will influence product distribution, and perhaps, to a lesser extent, the location of farms.

The trend in home gardening may also influence future vegetable consumption. Projected growth in home gardening is expected to temper the growth in demand for purchased vegetables. However, the magnitude and significance of this effect is unknown. Home gardening already has had a sizeable effect on the fresh tomato market, with approximately 35 percent of fresh tomatoes consumed at home being grown in home gardens. Therefore, a sustained increase in the aggregate demand for vegetables and potatoes is expected, as well as modest increases in per capita demand.

Smallwood, David M. and James R. Blaylock. "Household Expenditures for Fruits, Vegetables, and Potatoes." USDA, Economic Research Service, Technical Bulletin no. 1690, 1984.

Blaylock, James R. and Anthony E. Gallo, "Modeling the Decision to Produce Vegetables at Home," *American Journal of Agricultural Economics* 65 (no. 4, Nov., 1983): 723-29.

Table 1.—Vegetable and potato expenditure response to a 10-percent increase in income

Item	Expenditure response			Percentage of response due to market entry
	Total response	Market entry response	Expenditure level response	
			Percent	
Vegetables and potatoes	.89	.24	.65	27
Vegetables	1.08	.36	.72	33
Fresh	1.51	.67	.84	45
Dark green	1.57	1.20	.36	76
Deep yellow	1.93	1.41	.52	73
Light green	1.64	.90	.74	55
Tomatoes	1.72	1.22	.50	71
Other	1.90	1.10	.80	58
Canned	-.41	-.22	-.19	54
Frozen	4.75	3.46	1.29	73
Juice	2.70	2.19	.51	81
Dried	-3.30	-2.61	-.69	79
Potatoes, including sweet	.04	.02	.02	47
Fresh	-.62	.34	.28	55
Canned	-1.24	-1.08	-.16	87
Frozen	1.35	1.13	.22	84
Dehydrated	-.51	-.44	-.07	87
Chips, sticks, and salads	1.70	1.27	.43	75

SOURCE: 1977-78 USDA Nationwide Food Consumption Survey.

Table 2.—Weekly per person expenditure on vegetables and potatoes by region

Item	Region			
	Percentage change from base			
	Northeast (base)	North Central	South	West
	<i>Dollars</i>		<i>Percent</i>	
Vegetables and potatoes	1.796	-16.0	-10.9	-8.3
Vegetables	1.466	-20.7	-12.3	-6.9
Fresh	.850	-24.8	-18.3	-2.3
Dark green	.101	-49.4	-37.4	-11.8
Deep yellow	.060	-21.6	-36.9	8.7
Light green	.261	-11.5	-7.1	4.1
Tomatoes	.133	-45.1	-17.2	13.7
Other	.289	-27.2	-23.3	-.4
Canned	.392	-2.3	.5	-11.2
Frozen	.170	-32.7	-28.9	-16.2
Juice	.036	7.0	-2.1	26.2
Dried	.024	23.1	123.3	72.6
Potatoes, including sweet	.276	8.5	1.7	-11.5
Fresh	.157	-6.2	6.7	-20.4
Canned	.006	12.9	6.2	-.8
Frozen	.019	16.7	-39.7	-25.5
Dehydrated	.008	39.3	-33.8	14.9
Chips, sticks, and salads	.065	45.0	1.8	4.8

SOURCE: 1977-78 USDA Nationwide Food Consumption Survey.

Table 3.—Weekly per person expenditures on vegetables and potatoes by season

Item	Season			
	Percentage change from base			
	Spring (base)	Summer	Fall	Winter
	<i>Dollars</i>		<i>Percent</i>	
Vegetables and potatoes	1.657	-5.2	-5.7	2.8
Vegetables	1.335	-5.8	-6.1	2.5
Fresh	.786	-3.8	-14.6	-7.2
Dark green	.073	-17.3	-2.2	3.1
Deep yellow	.047	-13.5	1.2	23.5
Light green	.260	-1.9	-13.0	-2.2
Tomatoes	.130	-6.5	-31.4	-17.1
Other	.266	-3.9	-16.8	-13.4
Canned	.363	-7.3	8.6	19.8
Frozen	.137	-23.6	-.9	9.2
Juice	.040	-13.7	3.8	-5.4
Dried	.032	-2.5	36.3	49.6
Potatoes, including sweet	.276	-5.3	.1	8.0
Fresh	.149	-7.2	4.9	10.9
Canned	.007	-40.8	10.9	.6
Frozen	.018	-16.9	-14.8	-7.3
Dehydrated	.008	-33.3	-24.1	3.7
Chips, sticks, and salads	.070	9.1	-6.7	10.8

SOURCE: 1977-78 USDA Nationwide Food Consumption Survey.

Table 4.—Weekly per person expenditures on vegetables and potatoes by race

Item	Race		
	White (base)	Percentage change from base	
		Black	Nonwhite- nonblack
	<i>Dollars</i>		<i>Percent</i>
Vegetables and potatoes	1.606	4.1	20.2
Vegetables	1.282	6.7	29.1
Fresh	.722	6.5	25.1
Dark green	.061	143.5	72.6
Deep yellow	.053	-47.8	-3.5
Light green	.243	11.3	20.2
Tomatoes	.110	-8.3	55.4
Other	.248	-21.8	19.1
Canned	.383	-8.9	37.7
Frozen	.127	48.7	-37.7
Juice	.043	-59.4	-13.2
Dried	.035	64.9	147.9
Potatoes, including			
sweet	.279	-1.6	-12.0
Fresh	.150	13.3	13.4
Canned	.006	19.1	-66.5
Frozen	.018	-48.2	-76.0
Dehydrated	.008	-61.6	-59.6
Chips, sticks, and salads	.077	-36.0	-47.2

SOURCE: 1977-78 USDA Nationwide Food Consumption Survey.

Table 5.—Weekly per person expenditures on vegetables and potatoes by age group

Item	Age (years)					
	40-64 (base)	Percentage change from base				
		0-2	3-12	13-19	20-39	65 and over
	<i>Dollars</i>					<i>Percent</i>
Vegetables and potatoes	1.725	-32.9	-16.1	-10.7	-4.2	-3.3
Vegetables	1.408	-34.8	-20.3	-13.3	-6.9	-3.2
Fresh	.819	-50.7	-20.5	-19.0	-14.1	-1.7
Dark green	.085	-69.5	-37.7	-27.7	-18.1	-5.1
Deep yellow	.052	-33.6	3.2	-20.4	-24.6	25.0
Light green	.273	-58.9	-19.3	-4.0	-15.3	3.3
Tomatoes	.110	-33.6	19.1	5.3	2.3	-4.7
Other	.277	-44.7	-24.3	-23.9	-15.2	-6.7
Canned	.376	31.3	-9.0	7.0	5.4	-2.2
Frozen	.119	27.6	35.0	35.3	5.0	7.4
Juice	.048	-87.7	-26.1	-11.3	-15.3	-30.4
Dried	.052	-70.9	-47.8	-55.4	-23.1	-13.8
Potatoes, including sweet	.273	-16.2	-.4	7.4	10.4	-5.9
Fresh	.181	-35.6	-29.7	-36.4	-29.0	10.0
Canned	.006	2,244.7	-14.0	-2.0	-12.6	13.8
Frozen	.013	91.9	98.5	218.5	50.3	-47.8
Dehydrated	.005	185.8	119.1	111.8	30.6	25.5
Chips, sticks, and salads	.050	55.2	173.8	196.2	119.6	-55.2

SOURCE: 1977-78 USDA Nationwide Food Consumption Survey.

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Table 1.—Fresh vegetables: Reported acreage of principal crops

Seasonal group and crop	Prospective area for harvest (major States)		
	1984		Percent of 1983
	1983	Indicated	
	1,000 acres		Percent
Winter	145.3	149.4	103
Spring	161.7	171.0	106
Summer			
Broccoli ¹	19.2	17.9	93
Carrots ¹	23.8	25.3	106
Cauliflower ¹	13.9	13.8	99
Celery ¹	8.0	9.1	114
Sweet corn	104.2	106.9	103
Lettuce	47.5	44.8	94
Tomatoes	51.9	53.6	103
Total 7 vegetables ²	268.5	271.4	101
Onions			
Nonstorage	11.3	11.2	99
Storage	54.6	56.1	103
California ³	27.4	28.5	104
Total summer onions	93.3	95.8	103
Honeydew melons	14.9	15.9	107
Total 9 items	376.7	383.1	102

¹Includes fresh market and processing. ²May not add to total due to rounding. ³Primarily processing.

SOURCE: Statistical Reporting Service, USDA, Vegetables.

Table 2.—Fresh vegetables: Quarterly index of grower prices¹

Year	Quarter				Annual
	1st	2nd	3rd	4th	
	1977=100				
1973	81	98	74	64	79
1974	73	83	73	81	77
1975	85	93	83	90	88
1976	93	80	86	92	88
1977	128	93	84	96	100
1978	107	129	94	94	106
1979	134	105	95	101	109
1980	100	116	104	119	110
1981	163	127	121	128	135
1982	160	117	99	107	121
1983	119	145	114	138	129
1984	170	124			

¹Excludes potatoes.

SOURCE: Statistical Reporting Service, USDA, Agricultural Prices.

Table 3.—Fresh vegetables: Quarterly retail price index¹

Year	Quarter				Annual
	1st	2nd	3rd	4th	
	1967=100				
1973	151	167	151	137	152
1974	150	160	152	151	153
1975	168	169	165	160	166
1976	170	168	165	179	170
1977	221	216	178	184	200
1978	212	247	209	204	218
1979	254	224	211	226	229
1980	220	250	231	253	239
1981	287	275	258	248	267
1982	341	302	250	257	288
1983	292	327	286	305	302
1984	380	311			

¹Excludes potatoes.

SOURCE: Economic Research Service index derived from Consumer Price Index.

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Table 4.—Fresh vegetables: Average U.S. f.o.b. shipping point prices

Item	Year	January	February	March	April	May	June	July 1-15
<i>Dollars per cwt</i>								
Carrots	1984	14.40	17.40	16.40	16.80	13.30	12.80	12.20
	1983	12.20	12.40	10.90	9.72	10.80	11.20	15.60
Celery	1984	22.90	21.70	14.40	12.20	13.30	9.83	9.20
	1983	7.65	8.14	9.83	20.50	20.20	14.10	12.60
Corn, sweet	1984	29.10	27.60	20.90	16.60	13.40	12.40	13.70
	1983	19.20	23.70	24.40	17.60	12.90	11.10	14.90
Lettuce	1984	8.86	9.45	9.13	7.40	7.36	9.20	8.36
	1983	9.60	8.54	8.27	12.40	14.90	17.50	7.89
Onions	1984	19.40	19.60	25.30	14.00	23.50	11.50	13.20
	1983	5.13	6.35	6.86	7.93	9.40	8.68	9.45
Tomatoes	1984	40.60	44.00	34.80	25.00	27.60	25.50	21.30
	1983	18.60	37.30	46.00	39.40	32.00	26.60	27.60

SOURCE: Statistical Reporting Service, USDA, Agricultural Prices.

Table 5.—Fresh vegetables: Representative prices (wholesale lots), New York and Chicago

Market and commodity	State of origin	Unit	Tuesday nearest midmonth					
			1983			1984		
			May 2	June 7	July 5	May 1	June 5	July 3
Dollars								
NEW YORK								
Beans, snap, green	Florida	Bu. hamper and crt.	11.00	15.50	—	17.00	—	—
Broccoli,	Californina	Ctn. 14 bn.	10.50	10.00	12.00	7.50	8.00	10.50
Cabbage, domestic round type	New York	Crt. 1-3/4 bu.	—	—	—	—	—	—
Cantaloups	California	1/2 ctn. 18's	—	—	11.50	—	11.00	13.00
Carrots, topped, washed	California	Ctn. 48-1 lb. film bag,	8.00	8.00	9.00	10.00	8.00	11.00
Cauliflower	California	Ctn. film wrpd., 12's	12.00	13.00	11.00	9.50	10.00	11.50
Celery								
pascal	California	Crt. 2-3 doz.	20.00	13.50	17.50	11.50	11.50	11.50
Lettuce, iceberg	California	Ctn. 2 doz.	9.50	18.50	11.00	6.25	8.25	9.00
Onions								
jumbo	Texas	Sack 50-lb.	7.00	—	—	9.50	8.75	—
jumbo	California	Sack 50-lb.	6.00	—	—	—	9.00	8.75
Spinach, Savoy	New Jersey	Bkt. bu.	—	—	—	—	—	—
Tomatoes	Florida	Ctn. 25-lb.	16.50	10.50	—	9.50	13.00	—
Watermelon	Florida	Per lb.	—	.15	.13	—	—	.11
CHIGAGO								
Broccoli	California	Ctn. 14 bn.	11.50	9.50	11.50	8.00	8.25	8.75
Cabbage, domestic round type	Texas	Crt. 1-3/4 bu.	6.00	7.00	—	—	6.75	5.00
Cantaloups	California	1/2 ctn. 18's	—	15.50	15.50	—	10.00	12.50
Carrots, topped, washed	California	Ctn. 48-1 lb. film bag	8.50	8.50	11.25	13.00	10.00	10.50
Cauliflower	California	Ctn. film wrpd. 12's	14.50	13.50	13.50	10.00	10.50	15.00
Celery								
pascal	California	Crt. 2-3 doz.	22.50	15.50	19.50	14.00	15.50	11.50
Cucumbers	Florida	Ctn. 1-1/9 bu.	20.50	11.00	—	13.00	—	—
Honeydews	Texas	Crt. 2/3-flat 6-8's	—	7.50	—	—	7.50	7.00
Lettuce, iceberg	California	Ctn. 2 doz, head	9.50	15.50	10.50	7.00	7.75	8.50
Onions								
jumbo	Texas	Sack 50 lb.	7.00	6.25	7.00	9.00	8.00	8.00
jumbo	California	Sack 50 lb.	—	—	—	—	7.75	—
Tomatoes	Florida	Ctn. 25 lb.	16.00	9.50	9.50	8.50	12.50	8.50
Watermelon	Texas	Per lb.	—	.16	.17	—	.13	.11

SOURCE: Agricultural Marketing Service, USDA, Weekly summary of terminal market prices.

Table 6.—Fresh vegetables: Retail price, marketing margin, and grower-packer return per unit, sold in Baltimore, indicated months, 1983-84

Commodity, month, and retail unit	Retail price ¹	Marketing margin		Grower-packer return (FOB shipping point price) ²	
		Absolute	Percent of retail price	Absolute ³	Percent of retail price
	<i>Cents</i>	<i>Cents</i>	<i>Percent</i>	<i>Cents</i>	<i>Percent</i>
Cabbage (lb.)					
April 1983	29.0	21.5	74	7.5	26
April 1984	59.0	33.3	56	25.7	44
March 1984	74.0	31.2	42	42.8	58
Carrots (lb.)					
April 1983	35.0	25.3	72	9.7	28
April 1984	42.0	22.7	54	19.3	46
March 1984	50.0	33.9	68	16.1	32
Celery (lb.)					
April 1983	34.8	19.2	55	15.6	45
April 1984	34.8	25.9	74	8.9	26
March 1984	34.8	19.6	56	15.2	44
Corn, sweet (doz. ears)					
April 1983	444.0	239.4	54	204.6	46
April 1984	—	—	—	125.1	—
March 1984	—	—	—	272.8	—
Cucumbers (lb.)					
April 1983	104.7	62.2	59	42.5	41
April 1984	62.2	36.8	59	25.4	41
March 1984	90.0	47.6	53	42.4	47
Lettuce (head)					
April 1983	74.0	52.8	71	21.2	29
April 1984	64.0	50.6	79	13.4	21
March 1984	84.0	59.5	71	24.5	29
Onions, dry yellow (lb.)					
April 1983	24.0	14.8	62	9.2	38
April 1984	49.0	25.4	52	23.6	48
March 1984	42.0	23.4	56	18.6	44
Peppers, green (lb.)					
April 1983	133.2	78.9	59	54.3	41
April 1984	88.8	52.8	59	36.0	41
March 1984	163.6	64.6	39	99.0	61
Tomatoes, vine-ripe (lb.)					
April 1983	124.0	55.0	44	69.0	56
April 1984	79.0	49.1	62	29.9	38
March 1984	114.0	54.2	48	59.8	52

¹Retail prices from Maryland Department of Agriculture. ²Production areas; Cabbage-Florida, Carrots-California, Celery-California, Corn-Florida, Cucumbers-Florida, Lettuce-California, Onions-New York, Peppers-Florida and Tomatoes-Florida. ³Adjusted to account for waste and spoilage during marketing.

**Table 7.—Fresh vegetables: Representative truck rates
for selected vegetables, January-June 1983-84**

Commodity, area, and city	1983						1984					
	Jan.	Feb.	Mar.	Apr.	May	June	Jan.	Feb.	Mar.	Apr.	May	June
<i>Dollars per package</i>												
Cabbage (50 lb. wirebound crate)												
Southern Florida to:												
Atlanta	1.07	1.07	1.07	1.07	1.07	—	1.06	1.05	1.05	1.05	1.13	1.16
Chicago	2.67	2.67	2.50	2.50	2.50	—	2.53	2.31	2.31	2.31	2.50	2.50
New York City	2.67	2.67	2.50	2.50	2.50	—	2.44	2.28	2.28	2.34	2.50	2.50
Rio Grande Valley, Texas to:												
Atlanta	1.82	2.53	1.81	1.81	1.81	2.07	2.00	1.69	1.92	2.04	2.08	—
Chicago	2.72	1.88	2.23	2.23	2.23	2.38	2.35	2.31	2.31	2.38	2.35	—
New York City	2.96	3.76	3.23	3.23	3.23	2.69	3.42	3.31	3.69	3.54	3.62	—
Carrots (48-1 lb. film bags)												
Imperial Valley, California to:												
Atlanta	2.77	2.85	2.85	3.00	2.92	—	3.85	3.15	3.08	3.08	—	—
Chicago	2.62	2.77	2.62	2.92	2.69	—	3.08	3.00	2.85	2.92	—	—
New York City	3.85	4.46	4.46	3.92	4.00	—	4.77	4.31	4.23	4.38	—	—
Los Angeles	.81	.81	.81	.81	.81	—	—	—	—	—	—	—
Rio Grande Valley, Texas to:												
Atlanta	1.48	2.06	1.47	1.47	1.47	1.68	1.63	1.38	1.56	1.66	1.69	—
Chicago	1.75	2.56	1.81	1.81	1.81	1.75	1.91	1.88	1.88	1.94	1.91	—
Dallas	.88	.88	.88	.88	.88	1.03	.88	.88	.94	.94	.97	—
New York City	2.41	3.69	2.62	2.62	2.62	3.00	2.78	2.69	3.00	2.88	2.94	—
Celery (60 lb. wirebound crate)												
Southern California to:												
Atlanta	3.00	3.33	3.08	3.08	3.25	3.42	4.08	3.50	3.42	3.42	3.67	4.58
Chicago	2.83	3.25	2.91	2.18	2.96	3.25	3.25	3.25	3.00	3.17	3.33	4.08
New York City	4.25	5.00	4.33	4.25	4.42	5.00	5.25	5.25	4.67	4.92	5.00	6.75
Southern Florida to:												
Atlanta	1.07	1.07	1.07	1.13	1.13	1.13	1.13	1.12	1.12	1.12	1.20	2.67
Chicago	2.67	2.67	2.37	2.53	2.37	2.37	2.70	2.47	2.47	2.47	2.67	1.23
New York City	2.67	2.67	2.37	2.53	2.37	2.37	2.60	2.43	2.43	2.50	2.67	2.67
Corn (4-3/4 doz. wirebound crate)												
Southern Florida to:												
Chicago	1.87	1.89	1.87	1.87	1.87	2.00	2.13	1.95	1.95	1.95	2.11	2.11
New York City	1.87	1.89	1.87	1.87	1.87	2.00	2.05	1.92	1.92	1.97	2.11	2.11
Lettuce (24 head carton)												
Imperial Valley, California to:												
Atlanta	2.12	2.25	2.12	2.31	—	—	3.13	2.56	2.50	2.50	—	—
Chicago	2.12	2.25	2.12	2.31	—	—	2.50	2.44	2.31	2.38	—	—
Dallas	1.56	1.94	1.75	1.69	—	—	1.88	1.75	1.81	1.88	—	—
Los Angeles	.66	.66	.66	.66	—	—	—	—	—	—	—	—
New York City	3.19	3.25	3.25	3.19	—	—	3.88	3.50	3.44	3.56	—	—
Potatoes (100 lb. sack)												
Idaho Falls, Idaho to:												
Atlanta	4.52	4.52	4.52	4.40	4.52	4.52	4.86	4.99	4.99	4.99	4.99	4.74
Chicago	3.45	3.45	3.33	3.33	3.33	3.21	3.58	3.84	3.58	3.71	3.58	3.58
Presque Isle, Maine to:												
Atlanta	3.16	3.75	3.85	3.59	3.59	3.59	3.75	4.02	4.29	4.29	3.72	—
New York City	2.19	2.54	2.38	2.38	2.35	2.36	2.49	2.41	2.44	2.44	2.38	2.38
Western and Central New York to:												
Atlanta	2.32	2.50	2.50	2.50	2.50	—	—	—	—	—	—	—
New York City	1.65	1.65	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	—	—
Tomatoes, Vine Ripe (25 lb. carton)												
Southern Florida to:												
Atlanta	1.07	1.07	.73	.73	.73	.71	.64	.65	.65	.65	.70	.70
Chicago	1.27	1.27	1.29	1.29	1.29	1.29	1.41	1.41	1.41	1.43	1.48	1.48
New York City	1.27	1.27	1.29	1.29	1.29	1.44	1.45	1.37	1.37	1.41	1.48	1.48

— = not available.

SOURCE: Agricultural Marketing Service, U.S. Department of Agriculture, Fruit and Vegetable Truck Rate Report first week of the month.

Table 8.—Major fresh-vegetable shipments, April-June¹

Item	Year		1984 as percentage of 1983
	1983	1984	
		<i>1,000 cwt</i>	
Lettuce	15,752	16,633	106
Tomatoes	7,684	8,929	116
Onions	7,089	7,121	100
Celery	3,681	3,823	104
Carrots	3,744	3,896	104
Cabbage	3,155	3,703	117
Peppers	1,512	1,849	122
Cucumbers	2,522	2,422	96
Squash	750	693	92
Broccoli	1,151	2,381	207
Cauliflower	857	1,213	141
Total	47,897	52,663	110
Watermelon	9,711	14,323	147
Cantaloup	7,749	6,666	86
Honeydews	1,025	1,398	136
Total	18,440	22,387	121

¹Includes shipments from Mexico.

SOURCE: Agricultural Marketing Service, USDA, Fresh Fruits and Vegetables: Weekly Summary of Shipments and Arrivals.

Table 9.—Fresh vegetables: Acreage, yield, and production, January-June

Crop	Area harvested			Yield per acre			Production		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
	<i>1,000 acres</i>			<i>Cwt</i>			<i>Mil. cwt</i>		
Broccoli ¹	41.8	38.9	43.8	100	90	125	4.2	3.5	5.5
Carrots ¹	32.0	34.9	34.9	266	265	261	8.5	9.3	9.1
Cauliflower ¹	14.1	15.5	17.7	93	94	130	1.3	1.5	2.3
Celery ¹	18.4	17.6	17.3	509	517	535	9.4	9.1	9.3
Sweet corn	44.7	49.9	48.0	99	92	89	4.4	4.6	4.3
Lettuce	94.2	104.7	103.0	294	267	277	27.7	27.9	28.5
Onions	29.0	28.2	28.0	247	235	240	7.2	6.6	6.7
Tomatoes	42.3	44.4	45.6	268	251	244	11.3	11.1	11.1
Total 8 vegetables	316.5	334.1	338.3	232	219	226	74.0	73.6	76.8
Honeydews	4.9	5.5	5.0	160	140	190	.8	.8	1.0
Total Jan.-June	321.4	339.6	343.3	233	219	227	74.8	74.4	77.8

¹Includes fresh market and processing.

SOURCE: Statistical Reporting Service, USDA, Vegetables.

Table 10.—Canned vegetables: Carryover, pack, seasonal supply, and disappearance

Commodity and season	Carryover	Pack	Seasonal supply	Total seasonal shipments
<i>Million cases 24/303's</i>				
Lima beans				
1979-80	0.5	3.1	3.6	3.0
1980-81	0.6	2.8	3.4	2.7
1981-82	0.7	2.6	3.3	2.8
1982-83	0.5	2.3	2.8	2.5
1983-84	0.3	2.3	2.6	2.5
Snap beans				
1979-80	6.2	66.3	72.5	61.2
1980-81	11.3	58.2	69.5	53.2
1981-82	15.9	52.8	68.7	56.4
1982-83	12.4	48.8	61.2	53.2
1983-84	8.0	46.5	54.5	
Beets				
1979-80	2.9	15.1	17.9	11.3
1980-81	6.7	10.9	17.6	11.8
1981-82	5.8	9.7	15.5	11.4
1982-83	4.1	10.9	15.0	9.8
1983-84	4.3	8.0	12.3	
Sweet corn				
1979-80	9.8	60.0	69.8	60.2
1980-81	9.6	50.6	60.2	55.4
1981-82	4.7	57.9	62.6	55.4
1982-83	7.3	60.5	67.8	56.6
1983-84	11.2	51.6	62.8	
Green peas				
1979-80	1.6	36.5	38.1	31.8
1980-81	6.2	30.1	36.3	30.2
1981-82	6.2	27.3	33.5	27.7
1982-83	5.8	24.8	30.6	27.3
1983-84	3.2	20.8	24.0	
Sauerkraut				
1979-80	2.2	12.8	15.0	11.3
1980-81	2.4	11.3	13.7	11.7
1981-82	2.0	13.3	15.3	12.1
1982-83	3.2	10.8	14.0	9.9
1983-84	4.2	9.7	13.8	
Tomato juice				
1979-80	6.2	31.5	37.8	31.3
1980-81	6.5	27.6	34.1	32.1
1981-82	3.0	17.5	20.5	17.3
1982-83	3.2	24.0	27.2	22.2
1983-84	6.0			
Tomatoes				
1979-80	14.6	52.9	67.5	55.2
1980-81	12.3	53.1	65.4	55.1
1981-82	10.2	51.9	62.1	53.6
1982-83	8.6	63.1	71.1	57.5
1983-84	14.1	61.6	75.7	
Total				
1979-80	44.0	276.2	320.6	265.3
1980-81	55.6	247.7	303.6	254.9
1981-82	48.6	231.7	280.2	235.1
1982-83	45.1	244.3	288.8	237.6
1983-84	51.2	200.5	245.7	

SOURCE: National Food Processors Association.

Table 11.—Frozen vegetables: Carryover, pack, seasonal supply, and disappearance

Commodity and season	Carryover	Pack	Seasonal supply	Total seasonal shipments
<i>Million cases 24/303's</i>				
Broccoli				
1980-81	78.7	290.7	369.4	293.1
1981-82	76.3	306.8	383.1	327.6
1982-83	55.5	335.5	391.0	302.5
1983-84	88.5	85.2	112.7	
Lima beans				
1980-81	58.6	85.9	144.5	120.5
1981-82	24.0	88.8	112.8	98.8
1982-83	14.0	123.7	137.7	1/112.7
1983-84	27.5	85.2	112.7	
Snap beans				
1980-81	91.2	243.9	335.1	254.3
1981-82	80.9	257.4	338.3	269.5
1982-83	68.7	293.3	362.1	275.7
1983-84	86.4	263.2	349.6	
Cauliflower				
1980-81	40.6	84.8	125.4	97.8
1981-82	27.6	105.2	132.8	109.5
1982-83	23.3	111.6	134.9	98.6
1983-84	36.3	100.5		
Carrots				
1980-81	93.5	191.2	284.7	227.3
1981-82	57.4	269.8	327.2	252.2
1982-83	75.0	296.7	371.7	228.9
1983-84	142.8	212.5	355.3	212.5
Sweet corn				
1980-81	120.3	529.1	644.4	594.6
1981-82	54.8	619.4	674.2	610.2
1982-83	64.0	834.3	898.3	706.0
1983-84	192.3	661.2	853.5	
Green peas				
1980-81	122.5	315.6	438.1	369.2
1981-82	68.8	333.9	402.7	347.7
1982-83	55.0	404.8	459.8	367.3
1983-84	92.5	354.5	447.0	364.8
1984-85	82.2			
Spinach				
1980-81	30.3	169.3	199.6	166.6
1981-82	33.1	183.6	216.7	176.0
1982-83	40.7	150.7	191.4	162.6
1983-84	28.7	143.2	171.9	146.7
1984-85	25.2			
Total				
1980-81	635.7	1,910.5	2,546.2	2,123.3
1981-82	422.9	2,164.9	2,587.8	2,191.5
1982-83	396.3	2,550.6	2,946.9	1/2,253.4
1983-84	1,693.5	2,105.7	1/2,900.0	

¹ERS projections.

SOURCES: Carryover, Statistical Reporting Service; Pack, American Frozen Food Institute.

Table 12.—Frozen vegetables: Cold storage holdings

Commodity	July 1			Percent of a year earlier
	1982	1983	1984 ¹	
Million pounds				
Asparagus	13	12	12	100
Lima beans	18	33	37	112
Snap beans	69	86	81	94
Broccoli	106	60	101	168
Brussels sprouts	23	24	17	71
Carrots	81	147	105	71
Cauliflower	23	36	31	86
Sweet corn	94	231	165	71
Mixed vegetables	39	45	46	102
Okra	21	37	26	70
Onions	25	26	21	81
Blackeyed peas	6	5	4	80
Green peas	142	157	125	80
Peas and carrots	9	9	8	89
Spinach	108	75	99	132
Squash	35	41	32	78
Southern greens	32	29	24	83
Other vegetables	132	134	145	108
Total vegetables ²	976	1,188	1,080	91
Potatoes	937	1,015	835	82
Grand total ²	1,913	2,202	1,914	87

¹Preliminary. ²May not add to total due to rounding.

SOURCE: Cold Storage, SRS.

Table 13.—Processing vegetables: Planted and prospective acreage

Crop	1982 total	Planted acreage 1983		Prospective 1984 contract	1984 as percentage of contract 1983
		Total	Contract		
Beans, snap					
Freezing	63.1	60.2	59.1	65.1	110
Canning	150.2	145.6	134.2	140.5	105
Total	213.3	205.8	193.3	205.6	106
Sweet corn					
Freezing	160.5	137.4	136.8	151.7	111
Canning	295.4	279.0	278.0	298.6	107
Total	455.9	416.4	414.8	450.3	109
Green peas					
Freezing	156.3	153.6	153.6	168.7	110
Canning	162.1	165.3	165.3	184.2	111
Total	318.4	318.9	318.9	352.9	111
All three crops					
Freezing	379.9	351.2	349.5	385.5	110
Canning	607.7	589.9	577.5	623.3	108
Total	987.6	941.1	927.0	1,008.8	109
Tomatoes	317.6	299.1	291.0	298.3	103
Total four crops	1,305.2	1,240.2	1,218.0	1,307.1	107

SOURCE: Statistical Reporting Service, USDA, Vegetables.

**Table 14.—Canned vegetables:
Quarterly wholesale price index**

Year	Quarter				Annual
	1st	2nd	3rd	4th	
1967=100					
1979	184.0	185.6	189.1	188.0	186.7
1980	186.8	190.6	198.9	207.3	195.9
1981	213.7	223.5	232.1	239.0	227.1
1982	241.7	242.9	241.8	240.7	241.8
1983	242.9	244.0	248.0	250.0	246.2
1984	256.1	256.2			

SOURCE: Bureau of Labor Statistics, Producer Price Index.

**Table 15.—Frozen vegetables:
Quarterly wholesale price index**

Year	Quarter				Annual
	1st	2nd	3rd	4th	
1967=100					
1979	206.1	207.6	213.5	216.5	210.9
1980	214.6	220.5	227.5	226.6	222.3
1981	228.7	249.7	263.0	270.8	253.1
1982	275.7	278.7	282.7	283.0	280.0
1983	284.1	283.7	284.0	285.0	284.3
1984	285.0	290.3			

SOURCE: Bureau of Labor Statistics, Producer Price Index.

**Table 16.—Processed vegetables:
Quarterly retail price index**

Year	Quarter				Annual
	1st	2nd	3rd	4th	
1967=100					
1979	107.5	108.5	110.8	111.2	109.5
1980	113.9	115.3	118.8	122.0	117.5
1981	125.6	130.4	135.4	136.1	131.9
1982	137.8	138.8	140.1	138.7	138.9
1983	137.9	138.1	139.9	142.0	139.5
1984	144.6	146.0			

SOURCE: Bureau of Labor Statistics, Consumer Price Index.

**Table 19.—Potatoes: Acreage, yield per acre, and production, selected seasons,
1982, 1983, and indicated 1984**

Season	Harvested acreage			Yield per acre			Production		
	1982	1983	1984 ¹	1982	1983	1984 ¹	1982	1983	1984 ¹
<i>1,000 acres</i>									
Winter	11.0	11.3	13.0	206	194	220	2.26	2.19	2.86
Spring	81.0	79.6	84.7	259	230	274	20.96	18.34	23.25
Summer	101.1	100.0	107.8	225	187	210	22.77	18.68	22.65
Total	193.1	190.9	205.5	238	205	237	45.99	39.21	48.76

¹Revised.

SOURCE: Statistical Reporting Service, USDA, Crop Production.

**Table 17.—Canned vegetables:
Wholesale prices of selected items**

Commodity	July 1983	July 1984	Percent change
<i>Dollars per case</i>			
Snap beans			
24/303	6.25-6.75	7.50-7.65	122
6/10	9.25	10.75	116
Sweet corn			
24/303	7.75-8.00	8.25-8.50	106
6/10	10.75-12.00	10.75-11.50	98
Green peas			
24/303	7.75-8.00	9.00	114
6/10	11.25	13.50	120
Whole tomatoes			
24/303	8.75	8.75	100
6/10	13.00	12.75	98
Tomato paste			
6/10	24.10	22.00	91
55-gallon drums ¹ (cents per pound)	.52	.46	88

¹Data from American Institute of Food Distribution.

SOURCE: Food Production Management.

**Table 18.—Frozen vegetables:
July wholesale prices of selected items¹**

Commodity	Retail size	Foodservice ²
<i>Dollars</i>		
Snap beans		
1984	8.35	.50-.52
1983	7.95	.45-.50
Sweet corn, cut		
1984	7.80	.49
1983	7.20-7.32	.44-.49
Sweet corn, cob ³		
1984	9.85	9.40
1983	9.85-9.88	9.38-9.40
Green peas		
1984	8.20	.51
1983	8.20	.51
Broccoli, spears		
1984	9.95-10.25	.52-.57
1983	10.55	.57-.60

¹Retail sizes are 24/10-ounce or 9 ounce packages. ²Foodservice sizes are 12/2-1/2 pound packages. ³Retail size is 12/4's and food-service is 48/1's.

SOURCE: American Institute of Food Distribution.

Table 20.—Acreage of fall-crop potatoes

State	Planted area			Harvested area		
	1982	1983	1984	1982	1983	1984 ¹
	<i>1,000 acres</i>					
California	18.5	19.0	19.6	18.5	19.0	19.6
Colorado	45.5	44.5	52.0	45.0	44.0	51.5
Idaho	325.0	315.0	330.0	322.0	312.0	327.0
Maine	107.0	95.0	94.0	106.0	94.0	89.0
Michigan	41.0	43.0	45.0	39.0	41.0	43.0
Minnesota	71.0	70.5	77.1	64.0	62.5	68.6
New York	45.3	42.0	41.0	44.0	40.8	39.8
North Dakota	122.0	132.0	136.0	115.0	128.0	133.0
Oregon	53.5	49.2	56.0	52.5	48.5	55.0
Washington	110.0	103.0	113.0	110.0	103.0	113.0
Wisconsin	66.0	63.0	61.0	64.5	62.0	60.0
Other	96.2	96.5	95.1	93.3	95.0	92.7
Total	1,106.0	1,072.7	1,119.8	1,073.8	1,049.8	1,092.2

¹Indicated 1984.

SOURCE: Statistical Reporting Service, USDA, Crop Production.

Table 21.—Potatoes: U.S. monthly and season average prices received by growers, 1978-84

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Season average ¹
	<i>Dollars per cwt</i>												
1978	3.24	3.20	3.25	3.30	3.84	5.32	6.71	4.92	3.49	3.07	3.08	3.07	3.38
1979	3.09	2.77	2.94	2.82	3.08	3.00	3.41	3.61	3.23	3.14	3.35	3.51	3.43
1980	3.44	3.37	3.23	3.21	3.75	4.35	6.19	7.77	6.02	4.42	5.47	6.63	6.55
1981	7.38	7.51	8.12	8.41	8.22	9.13	9.67	7.06	4.84	4.01	4.44	4.65	5.41
1982	4.71	4.78	5.03	5.59	6.21	7.11	6.52	5.80	4.27	3.78	3.73	3.67	4.45
1983	3.53	3.69	4.07	4.65	5.50	5.34	6.41	7.20	5.05	4.22	4.79	5.30	5.69
1984	6.10	6.28	6.45	6.94	6.79	7.41	8.78						

¹Season average price of crop in indicated year.

SOURCE: Statistical Reporting Service, Agricultural Prices.

Table 22.—Retail price index for fresh potatoes

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
	<i>1967=100</i>												
1978	184.5	187.7	187.9	191.8	201.4	240.6	283.9	262.9	221.1	198.5	191.3	190.0	211.8
1979	191.4	194.8	200.1	197.3	203.9	221.5	225.7	211.4	199.3	191.1	195.7	207.0	203.3
1980	203.8	203.3	203.3	201.7	210.1	246.5	310.5	327.1	313.2	295.6	293.0	297.7	258.8
1981	326.1	350.2	363.9	378.1	384.4	414.3	414.9	375.1	329.1	290.4	286.3	286.8	350.0
1982	288.8	297.4	301.0	306.1	320.3	344.9	370.9	328.1	272.4	243.8	240.8	241.3	296.3
1983	236.2	240.6	241.1	258.7	282.3	304.7	320.7	342.2	336.1	316.9	305.0	317.6	291.8
1984	342.3	359.6	363.5	367.3	372.1								

SOURCE: Bureau of Labor Statistics, Consumer Price Index.

Table 23.—Wholesale price index for frozen french fries

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
1967=100													
1978	197.4	195.0	198.9	198.0	197.6	198.1	198.7	207.8	210.1	208.2	210.4	209.6	202.5
1979	209.6	208.7	209.5	210.7	210.4	209.5	209.5	218.8	222.5	220.0	220.2	218.7	214.0
1980	216.9	217.1	216.2	220.0	220.8	226.4	228.7	230.5	233.9	233.8	224.6	232.6	225.1
1981	233.2	226.0	238.1	252.5	253.0	262.4	269.2	270.1	275.2	280.5	281.5	282.2	260.3
1982	282.8	281.2	282.3	280.7	282.4	281.4	280.8	288.3	289.1	192.2	290.9	291.3	277.0
1983	294.6	291.7	292.4	292.2	292.0	292.7	288.8	288.8	286.8	287.4	290.5	291.0	290.7
1984	294.0	292.3	NA	306.4	305.9	313.4							

NA = Not available.

SOURCE: Bureau of Labor Statistics, Producer Price Index.

Table 24.—Sweetpotatoes: Harvested acreage by State, United States, 1982, 1983, and indicated 1984

State and area	Year			1984 as percentage of 1983
	1982	1983	Indicated 1984 ¹	
	1,000 acres			Percent
New Jersey	2.9	2.4	2.4	100
Maryland	1.3	1.1	1.1	100
Virginia	2.2	1.2	1.0	83
Central Atlantic	6.4	4.7	4.5	96
North Carolina	44.0	37.0	40.0	108
South Carolina	5.3	4.0	5.0	125
Georgia	6.3	5.8	6.8	117
Lower Atlantic	55.6	46.8	51.8	111
Tennessee	1.5	1.4	1.6	114
Alabama	5.5	4.9	5.9	120
Mississippi	5.0	4.7	4.8	102
Louisiana	25.0	24.0	23.0	96
Texas	7.2	7.1	7.3	103
South Central	44.2	42.1	42.6	101
California	9.2	8.8	9.0	102
United States	115.4	102.4	107.9	105

¹Indicated as of June 1.

SOURCE: Statistical Reporting Service, Acreage.

Table 25.—Quarterly and season-average grower prices for sweetpotatoes

Year	Quarter				Season average ¹
	1st	2nd	3rd	4th	
Dollars per cwt					
1978	12.63	16.77	13.68	9.33	10.60
1979	12.47	16.30	15.39	8.49	8.92
1980	10.27	12.83	13.46	12.83	13.60
1981	18.37	23.37	15.63	12.07	13.60
1982	17.20	18.26	10.32	6.99	7.90
1983	9.10	9.70	10.79	11.22	12.30
1984	18.00	18.80			

¹Season-average price of crop in indicated year.

SOURCE: Statistical Reporting Service, Agricultural Prices.

Table 26.—Processed mushrooms: U.S. production, stocks, sales, imports, and apparent consumption

	January-March		Marketing year	
	1983	1984	1981/82	1982/83
1,000 pounds				
Beginning stocks ¹	16,048	12,010	28,751	27,253
Production ¹	22,660	26,769	98,341	83,141
Supply ¹	38,708	38,779	127,092	110,394
Ending stocks ¹	14,333	15,029	27,253	14,980
Sales ²	29,816	30,992	113,815	118,850
Imports ²	29,830	46,693	95,682	114,451
Apparent consumption ²	59,592	77,621	209,057	233,011

¹Canned mushrooms only. ²Canned and frozen mushrooms.

SOURCE: U.S. International Trade Commission, Publication 1537.

Table 27.—Canned mushroom imports, total and selected countries

Countries	July-June 1981-1982	July-June 1982-1983	July-May 1982-83	July-May 1983-84
	Million pounds			
China, People's Republic of	33.5	42.9	40.3	39.3
China, Republic of (Taiwan)	30.0	41.2	36.6	50.9
Hong Kong	21.4	16.8	15.4	18.2
Korea, Republic of	6.5	7.3	6.3	8.6
Other	3.5	5.2	4.7	17.4
World total	94.9	113.4	103.3	134.4

SOURCE: Bureau of Census.

Table 28.—Dry edible beans: U.S. quarterly and season-average prices received by growers

Year	Quarter				Season average ¹
	1st	2nd	3rd	4th	
1977	14.87	16.93	15.50	22.90	20.20
1978	21.73	19.53	16.40	16.57	17.30
1979	17.30	18.73	20.73	21.50	22.80
1980	24.76	23.03	25.53	26.00	28.00
1981	28.60	34.20	28.33	23.23	21.00
1982	19.70	18.17	15.67	13.73	14.30
1983	12.07	14.83	21.87	24.13	22.80
1984	21.23	21.13			

¹Season-average price of crop in indicated year.

SOURCE: Statistical Reporting Service, Agricultural Prices.

Table 29.—Dry edible beans: Dealer prices for selected classes¹

Class and area	July 1983	July 1984
<i>Dollars per cwt</i>		
Pintos		
Colorado	18.66	18.94
Idaho	18.72	18.84
North Dakota-Minnesota	17.79	17.79
Great Northerns		
W. Nebraska-E. Wyoming	27.88	18.97
Pea (Navy) Beans		
Michigan	22.19	26.22
N. Dakota-Minnesota	21.83	24.50
California		
Large Lima	35.38	60.94
Baby Lima	32.00	27.19
Red Kidney	27.62	39.50

¹F.o.b. dealer selling prices for carlots and trucklots, basis U.S. No. 1, cleaned and bagged.

SOURCE: Agricultural Marketing Service, Bean Market News, Denver.

Table 30.—Dry edible beans: Harvested acreage

State	Harvested area		1984 as	percentage of 1983
	1982	1983	Indicated 1984 ¹	
1,000 acres				
California	210.0	138.0	174.0	126
Colorado	185.0	150.0	170.0	113
Idaho	141.0	88.0	138.0	157
Michigan	550.0	350.0	390.0	111
Nebraska	212.0	131.0	150.0	114
North Dakota	240.0	160.0	200.0	125
Other ²	239.0	119.7	190.0	159
Total	1,777.0	1,136.7	1,412.0	124

¹Indicated as of June 1. ²Includes Kansas, Minnesota, Montana, New York, Utah, Washington, and Wyoming.

SOURCE: Statistical Reporting Service, Acreage.

Table 31.—U.S. pulse exports

Crop/variety	Total seasonal ¹		Season-to-date ²		1984 as percentage of 1983
	1981/82	1982/83	1982/83	1983/84	
Million pounds					
Dry beans					
Navy	177.0	196.5	171.5	113.0	66
Great Northern	154.8	151.8	140.3	74.9	53
Pinto	845.8	31.5	21.0	51.5	245
Other	487.4	182.0	155.0	151.6	98
Total	1,669.0	561.8	487.8	391.0	80
Dry peas	237.7	307.5	244.3	231.8	95
Lentils	158.7	110.1	91.0	63.9	70
Total pulses	2,065.4	709.4	823.1	686.7	83

¹September-August crop year. ²Through May.

SOURCE: Bureau of Census.

Table 32.—Planted acreage of dry peas and lentils

Class	1982	1983	1984	Percent change from a year earlier
<i>Acres</i>				
Regular green	141,035	140,170	166,772	119
Small sieve green	28,943	17,999	19,717	110
Yellow	38,094	33,256	14,738	44
Lentils	182,977	100,960	63,116	62
Total	391,049	292,285	264,343	90

SOURCE: American Dry Pea and Lentil Association.

Table 33.—Grower prices of dry edible peas and lentils

Crop	1983			1984		
	Apr.	May	June	Apr.	May	June
<i>Dollars per cwt</i>						
Green peas	9.30	9.25	9.50	9.00	8.95	9.20
Yellow peas	8.55	8.75	8.65	9.40	7.50	7.30
Lentils	12.30	12.05	12.25	14.25	14.35	14.55

SOURCE: Bean Market News, AMS, Denver.

Table 34.—Commercial fresh vegetables and melons: Civilian per capita consumption, farm weight, 1972-1983¹

Calendar year	Vegetables										
	Leafy, green and yellow										
	Tomatoes	Arti-chokes	Aspara-gus	Snap beans	Broccoli	Cabbage	Carrots	Lettuce and escarole ⁴	Green peppers	Spinach	Misc. ^{3, 4}
<i>Pounds</i>											
1972	12.1	.3	.5	1.6	.7	8.8	6.5	23.2	2.7	.5	4.5
1973	12.5	.3	.4	1.5	.8	8.9	6.7	23.7	2.8	.5	4.2
1974	11.8	.3	.4	1.5	.8	9.1	6.9	24.2	3.0	.4	4.4
1975	11.9	.3	.4	1.6	1.0	9.1	6.4	24.2	3.1	.5	4.3
1976	12.6	.3	.4	1.6	1.1	8.8	6.4	24.9	2.8	.5	4.5
1977	12.4	.3	.4	1.5	1.2	8.5	5.0	26.4	3.4	.6	5.3
1978	13.2	.2	.3	1.4	1.1	8.9	5.9	26.2	3.4	.6	5.1
1979	12.9	.4	.3	1.4	1.5	8.5	5.8	26.5	3.6	.7	5.6
1980	13.4	.3	.3	1.4	1.6	8.6	6.3	27.3	3.6	.8	6.0
1981	13.3	.5	.3	1.4	1.8	8.6	6.4	26.2	3.5	.9	5.5
1982	13.9	³	³	³	2.2	³	7.4	25.3	³	³	³
1983 ²	13.2	³	³	³	2.1	³	7.1	25.9	³	³	³

See footnotes at end of table.

Continued—

Table 34.—Commercial fresh vegetables and melons: Civilian per capita consumption, farm weight, 1972-1983—Continued

Calendar year	Vegetables										Melons		Total vege- tables and melons	Dehy- drated onions
	Other										Total vege- tables	Honey- dews		
	Cauli- flower	Celery	Corn	Cucum- bers	Egg- plant	Garlic	Onions	Miscell- aneous	Total					
Pounds														
1972	.8	7.1	7.8	3.3	.5	.4	9.8	5.7	35.4	96.8	20.6	1.2	118.6	2.0
1973	.8	7.5	8.0	3.0	.6	.5	9.2	5.6	35.2	97.5	20.3	1.3	119.1	2.4
1974	.8	7.3	7.6	3.4	.5	.7	10.5	5.6	36.4	99.2	17.6	1.2	118.0	2.8
1975	.9	7.0	7.8	3.1	.6	.8	9.5	5.5	35.2	98.0	17.7	1.2	116.9	3.0
1976	1.0	7.4	8.1	3.6	.6	.5	10.0	5.7	36.9	100.8	19.0	1.2	121.0	2.3
1977	1.1	7.0	7.7	3.9	.6	.8	10.0	5.7	36.8	101.8	19.9	1.3	122.9	2.7
1978	.9	7.3	7.4	4.2	.6	.8	10.3	5.7	37.2	103.5	20.2	1.6	125.3	2.7
1979	1.3	7.4	7.3	4.3	.6	1.0	9.7	5.9	37.5	104.8	19.3	1.5	125.5	4.5
1980	1.3	7.8	7.0	4.3	.6	1.0	9.8	5.5	37.4	107.1	17.9	1.4	126.4	3.1
1981	1.6	7.7	6.9	4.4	.6	.7	9.8	4.4	36.3	104.8	19.2	1.6	125.7	2.6
1982	1.6	7.8	6.8	3	3	3	11.4	3	627.6	776.4	3	2.1	78.5	4.
1983 ²	1.7	7.1	7.0	3	3	3	12.1	3	627.9	776.2	3			
1.9	78.1	3.3												

¹Excludes quantities produced in home gardens. ²Preliminary. ³Data series discontinued in 1982. ⁴Beginning 1982, lettuce only. ⁵Sum of broccoli, carrots, and lettuce. ⁶Sum of cauliflower, celery, corn, and onions. ⁷See footnotes 5 and 6.

Table 35.—Canned vegetables: Per capita consumption, processed weight, 1972-1983¹

Period	Leafy, green, and yellow vegetables							Tomato products			Other vegetables						Total ⁵
	Aspar- agus	Lima beans	Snap beans	Carrots	Peas	Pump- kin and squash	Spin- ach	Whole toma- toes	Pulp and puree	Other tomato products ²	Beets	Corn	Pickles	Sauer- raut	Sweet pota- toes	Other ³	
Pounds																	
1972	.6	.3	5.8	.8	3.8	.6	.8	5.1	1.1	13.9	1.5	6.5	7.8	1.4	1.1	4.1	55.9
1973	.7	.3	5.9	.6	4.2	.6	.9	5.7	1.2	14.5	1.3	6.4	7.9	1.4	1.3	4.3	57.3
1974	.5	.3	5.9	.6	3.5	.6	.8	4.9	1.2	15.5	1.3	6.0	7.7	1.5	1.4	4.7	56.4
1975	.5	.3	5.5	.6	3.4	.6	.6	4.9	1.0	17.0	1.3	5.0	7.7	1.3	.9	4.0	54.6
1976	.6	.3	5.9	.5	3.6	.5	.6	5.1	1.1	15.9	1.3	5.7	8.3	1.4	.9	3.2	54.9
1977	.4	.4	5.8	.6	3.8	.4	.6	5.1	.9	16.3	1.4	6.2	8.1	1.4	.8	3.1	55.3
1978	.3	.3	5.9	.5	3.6	.5	.7	5.2	1.0	16.2	1.4	5.9	8.1	1.3	1.1	2.3	54.4
1979	.3	.3	5.8	.5	3.2	.6	.8	5.7	1.0	17.4	1.2	5.7	8.3	1.3	.9	2.4	55.6
1980	.3	.3	6.3	.5	3.3	.4	.5	6.0	.9	13.0	1.2	5.8	7.8	1.3	.7	2.3	50.6
1981	.3	.3	5.3	.4	3.0	.4	.5	6.1	.9	12.6	1.2	5.1	7.5	1.2	.9	2.0	47.7
1982	.3	.3	5.3	.3	3.0	.4	.5	6.1	.9	13.2	1.1	5.4	6.9	1.0	.8	2.5	47.9
1983 ⁴	.3	.3	5.2	.6	2.7	NA	NA	6.5	.8	4.5	1.1	5.2	NA	1.4	1.2	NA	39.8

NA = Not available. ¹Excludes soups and baby food. Civilian consumption only. ²Paste, sauce, catsup, chile sauce, tomato and other vegetable juices. ³Includes miscellaneous greens, pimentos, potatoes, mixed vegetables, and all items, especially in earlier years, for which no separate data are available. ⁴Preliminary. ⁵Totals do not add due to rounding.

Table 36.—Frozen vegetables: Per capita consumption, processed weight, 1972-1983¹

Period	Leafy, green, and yellow vegetables									Other vegetables				
	Aspar- agus	Snap beans	Lima beans	Carrots	Peas	Bro- ccoli	Brussels sprouts	Spinach	Other	Cauli- flower	Corn cut basis	Onions	Potato products	Total
Pounds														
1972	.1	1.1	.7	.8	1.8	1.0	.2	.7	1.2	.4	1.5	.5	12.2	22.1
1973	.1	1.1	.7	1.0	1.8	1.1	.2	.7	1.5	.4	1.6	.5	13.2	23.8
1974	.1	1.1	.6	1.0	1.7	1.0	.3	.8	1.1	.4	1.6	.5	13.1	23.2
1975	.1	.9	.6	.9	1.7	.9	.2	.7	1.2	.4	1.5	.6	13.7	23.3
1976	.1	1.1	.5	.9	1.6	1.0	.3	.7	1.4	.4	1.5	.7	14.6	24.7
1977	.1	1.0	.5	1.0	1.5	1.1	.2	.7	1.2	.4	1.7	.7	15.7	26.0
1978	.1	1.0	.5	1.0	1.6	1.4	.3	.7	1.2	.5	1.8	.7	17.2	27.9
1979	.1	1.1	.5	1.1	1.7	1.3	.3	.7	1.2	.5	2.1	.7	17.7	29.0
1980	.1	1.0	.5	.9	1.5	1.4	.3	.8	0.9	.5	1.9	.7	16.9	27.3
1981	.1	1.1	.5	1.0	1.6	1.5	.3	.8	1.3	.6	2.1	.7	18.2	29.7
1982	.1	1.1	.5	1.0	1.4	1.5	.3	.7	1.3	.5	2.0	.8	18.1	28.8
1983 ²	.1	1.0	.3	1.0	1.5	1.5	.2	.6	1.5	.5	2.2	.6	18.8	29.8

¹Civilian consumption only. ²Preliminary.

Table 37.—Civilian per capita consumption of selected commercially produced fresh and processed vegetables¹ United States, calendar years 1971-83

Commodity	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983 ²
<i>Pounds fresh equivalent basis</i>													
Asparagus													
Fresh	.40	.50	.40	.40	.40	.40	.40	.30	.30	.30	.30	(8)	(8)
Canned	.73	.70	.83	.61	.64	.66	.48	.45	.33	.33	.37	.32	.32
Frozen	.24	.19	.21	.19	.17	.21	.17	.17	.14	.12	.11	.10	.12
Beans, lima ³													
Canned	.50	.44	.43	.42	.37	.41	.47	.39	.22	.19	.17	.17	.16
Frozen	1.35	1.45	1.46	1.32	1.14	1.00	1.12	1.03	1.04	.99	1.06	.99	.65
Beans, snap													
Fresh	1.60	1.60	1.60	1.50	1.60	1.60	1.50	1.40	1.40	1.40	1.40	(8)	(8)
Canned	4.00	3.97	4.00	4.02	3.80	4.07	3.99	3.82	4.16	4.52	3.75	3.78	3.68
Frozen	1.22	1.26	1.34	1.27	1.04	1.35	1.18	1.19	1.29	1.16	1.33	1.28	1.21
Broccoli													
Fresh	.70	.70	.80	.80	1.00	1.10	1.20	1.11	1.50	1.60	1.80	2.20	2.10
Frozen	1.19	1.32	1.41	1.38	1.25	1.36	1.50	1.83	1.80	1.86	2.02	1.97	1.98
Cabbage													
Fresh	9.20	8.80	9.00	9.10	9.10	8.80	8.50	8.90	8.50	8.60	8.60	(8)	(8)
Canned ⁴	2.46	2.18	2.18	2.39	2.08	2.21	2.18	2.06	2.40	2.44	1.94	1.84	2.58
Corn ⁵													
Fresh	7.50	7.90	8.00	7.60	7.80	8.10	7.70	7.40	7.30	7.00	6.90	6.80	7.00
Canned	15.12	15.91	15.68	14.70	12.44	13.96	15.19	14.39	14.09	14.49	12.52	13.23	12.85
Frozen	5.41	5.41	5.88	5.78	5.63	5.69	6.46	6.71	7.58	7.18	7.58	7.24	8.24
Cucumbers													
Fresh	3.10	3.30	3.00	3.40	3.10	3.60	3.90	4.20	4.30	4.30	4.40	(8)	(8)
Canned ⁶	5.63	5.80	5.88	5.74	5.76	6.14	6.03	6.15	6.19	5.82	5.55	5.16	NA
Peas, green ³													
Canned	6.83	6.84	7.65	6.30	6.19	6.48	6.90	6.33	5.85	5.93	5.59	5.52	5.07
Frozen	4.92	4.92	4.80	4.74	4.59	4.36	4.07	4.15	4.60	4.18	4.22	3.70	4.10
Spinach													
Fresh	.50	.40	.50	.40	.50	.50	.60	.60	.70	.80	1.00	(8)	(8)
Canned	.58	.64	.72	.69	.48	.46	.46	.54	.74	.46	.43	.42	NA
Frozen	1.04	1.03	.96	1.13	.92	1.01	1.03	1.05	1.01	1.08	1.07	.98	.94
Tomatoes													
Fresh	11.40	12.20	12.60	11.80	11.90	12.60	12.40	13.20	12.90	13.40	13.30	13.90	13.30
Canned ⁷	50.23	51.72	55.76	57.31	61.75	60.36	60.60	58.16	65.75	50.22	51.61	54.11	41.81

NA = Not available. ¹ Data for processed vegetables excludes quantities consumed in commercially produced soups, and baby foods and in canned wholesale mixtures such as peas and carrots and succotash. ² Preliminary. ³ "In pod" basis. ⁴ Sauerkraut, canned and bulk. ⁵ "On-cob" basis. ⁶ Pickles, canned and bulk. ⁷ Including canned whole tomatoes and tomato products other than soup. ⁸ Beginning 1982, data not available.

Table 38.—Commercially produced vegetables: Civilian per capita consumption, 1965-83

Period	Total	Fresh ¹	Processed ²			As percentage of annual total			
			Total	Canned	Frozen	Fresh	Processed		
							Total	Canned	Frozen
Pounds fresh equivalent basis						Percent ³			
Year									
1965	201.0	98.3	102.7	85.3	17.4	48.9	51.1	42.4	8.7
1966	201.5	95.9	105.6	86.7	18.9	47.6	52.4	43.0	9.4
1967	209.4	98.2	111.2	91.3	19.9	46.9	53.1	43.6	9.5
1968	214.9	101.2	113.7	92.7	21.0	47.1	52.9	43.1	9.8
1969	212.9	98.7	114.2	94.9	19.3	46.4	53.6	44.6	9.0
1970	213.6	99.1	114.5	94.0	20.5	46.4	53.6	44.0	9.6
1971	208.9	95.5	113.4	93.3	20.1	45.7	54.3	44.7	9.7
1972	212.9	96.8	116.2	95.8	20.3	45.4	54.6	45.0	9.5
1973	220.2	97.5	122.5	100.8	21.7	44.3	55.7	45.4	9.9
1974	219.8	99.2	120.6	99.9	20.7	45.1	54.9	45.4	9.4
1975	218.3	98.0	120.3	100.7	19.6	44.8	55.2	46.1	9.0
1976	222.7	100.8	121.9	101.6	20.3	45.2	54.8	45.6	9.3
1977	225.1	101.8	123.3	102.5	20.8	45.2	54.7	45.5	9.2
1978	222.0	103.9	118.3	96.9	21.4	46.8	53.2	43.6	9.6
1979	231.6	104.8	126.8	104.1	22.7	45.2	54.7	44.9	9.8
1980	217.9	107.9	110.0	88.9	21.1	49.5	50.5	40.8	9.7
1981	214.8	104.9	110.0	86.7	23.3	48.9	51.1	40.4	10.7
1982	⁴ 187.8	⁴ 76.4	111.4	89.6	21.5	40.8	59.1	47.7	11.4
1983 ⁵	⁴ 187.8	⁴ 76.2	111.6	88.6	23.0	40.6	59.4	47.2	12.2

¹ Excludes dehydrated onions and melons. ² Data includes pickles and sauerkraut in bulk; excludes canned and frozen potatoes, canned sweetpotatoes, canned baby foods and canned soups. ³ Totals may not add to 100.0 because of rounding. ⁴ See footnotes 5 and 6, table 34. ⁵ Preliminary.

**Table 39.—Potatoes, sweetpotatoes, dry edible beans, and dry field peas:
Per capita consumption, primary distribution weight 1972-1983¹**

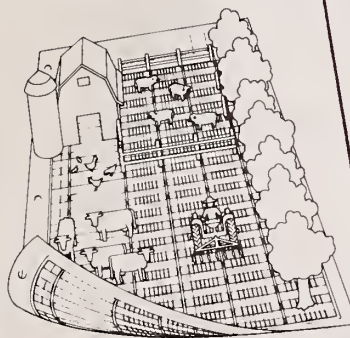
Period	Potatoes ²	Sweet- potatoes ³	Dry edible beans ⁴	Dry field peas ⁵
Pounds				
1972	119	5.1	5.6	.3
1973	116	5.1	7.0	.5
1974	113	5.4	5.0	.4
1975	120	5.3	6.5	.4
1976	114	5.3	6.0	.4
1977	120	4.8	6.2	.2
1978	119	5.0	4.8	.4
1979	116	5.4	6.5	.4
1980	116	4.9	5.4	.4
1981	115	4.5	5.4	.4
1982	120	6.0	7.4	.4
1983 ⁶	119	5.2	6.2	.4

¹Civilian consumption only. ²Farm weight basis, calendar years. Includes farm garden produce but not nonfarm. Includes table-stock and processed potatoes. ³Includes canned sweetpotatoes. ⁴Cleaned basis, calendar years. ⁵Cleaned basis, crop years beginning approximately September of year indicated. ⁶Preliminary. Final data to appear in October issue.

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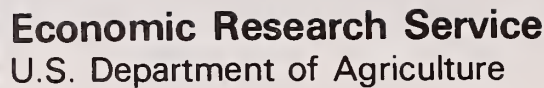
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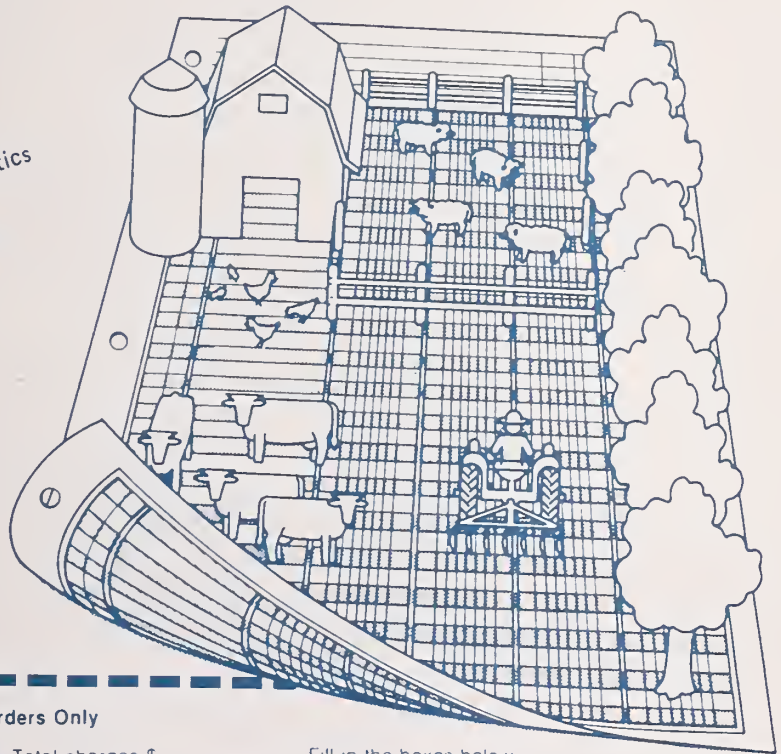
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